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COMMUNITY BASED DISTRIBUTION IN FAMILY PLANNING

DR. N.S.N. RAO*
and
DR. S. NARASIMHA REDDY**

INTRODUCTION

Concepts behind the Community Based Approach

The phrase Community Based Distribution of contraceptives was coined by Malcolm Potts[1] from his experiences in South America and Asia. He realised that methods which were the most difficult to use such as the IUD, were distributed through Western clinic based medicine, while the world's poor turned first to traditional practitioners, pharmacies and herbs. Therefore, he thought it fit to promote these contraceptive methods also through such first-level workers as traditional practitioners or pharmacists.

Community based distribution has been defined in different ways. According to the Special Panel of the International Planned Parenthood Federation (IPPF) [2], community based distribution is the non-clinical delivery of family planning services and supplies through a commercial network, at subsidised prices or through community agents who are not primarily family planning workers but who serve the project or programme on a fee-paid or voluntary basis, while Ganzalo[3] defines it as the distribution of contraceptives to people without their attendance at a clinic.

Community based distribution programmes are directed towards the user, wherever he or she lives, and do not wait for the user to come to the programme. Thus, the very limited geographical coverage of the clinics is almost infinitely increased by the system. Ganzalo further opines that these programmes aim at creating demand through effective community channels and then to satisfy the demand through distribution systems which put family planning within the financial and geographic reach of every one[3].

The IPPF defines Community Based Family Planning Services (CBFPS) as a strategy for delivering family planning services at the community level either through health or other extension workers. This includes traditional health workers or lay distributors including community institutions and leaders,

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local small shopkeepers or simply neighbours. It does not however cover large-scale commercial marketing programmes, subsidised or non-subsidised[2]. According to Rao,[4] community based family planning programmes possess several advantages such as:

1. Contraceptive distribution with appropriate and adequate medical back-up.
2. Provision of information, education and counselling through community channels.
3. Support from a catalytic agency in the form of development of skills for ensuring sustained community development efforts and resources in the initial stages.
4. Programme integration with other developmental efforts to improve the quality of family and community life.
5. Participation of the community in the design, delivery management and evaluation of family planning and other services.
6. Encouraging community self-reliance leading to community action for family planning.

The additional advantages of the above programmes as outlined by Rao[4] include the following:

1. It allows scarce and expensive medical professionals to concentrate on serious health problems.
2. It allows expansion of programme outreach without limiting the geographical area in case of a clinic-based programme.
3. It helps in conveying messages about the family size norm along with information about sources of availability of contraceptives to every home.
4. It brings about legitimisation of the programme due to greater involvement of the community in various activities related to the programme.
5. It encourages voluntary acceptance of family planning, as the programme is supported by the community on a voluntary basis and is not identifiable with "paid work"
6. It eliminates the travelling of an acceptor to a distant place for obtaining services.
7. It enables eligible couples to make their own choices in terms of family planning methods.
8. It ensures contraceptive accessibility to a greater number of young age couples with high fecundity thereby contributing to a reduction in the birth rate.
9. It enables the community to accept responsibility for the implementation of the family planning programme at the community level.

According to Echeverry[5] the concepts to be kept in mind while establishing a successful CBD family planning programme are:

1. To identify and employ the existing infrastructure—both medical and non-medical—which is popular and has already gained the community's confidence.
2. To take into consideration the legal context of the programme as well as the cultures and traditions of the involved communities.
3. To create adequate demand for contraceptives through proper approaches.
4. The approach should be presented as a solution to demographic or public health problems.
5. The programme must be kept simple keeping aside professionalism.
6. Only simple record keeping and monitoring techniques should be employed.

Though community based distribution programmes were considered as controversial experiments in the early part of the last decade, they are fast getting interwoven with national programmes and the work of international organisations like the IPPF. Established community based distribution programmes are now being run efficiently in several countries such as Bangladesh, Brazil, Columbia, Egypt, India, Indonesia, Korea, Mexico, the Philippines, Sri Lanka, Tunisia, Taiwan, Trinidad etc. As mentioned earlier, community based distribution (CBD) concepts have developed mostly from the experiments made in developing countries. Therefore, some of the well-established and successful CBD programmes both in other countries and in India have been reviewed in the following paragraphs.

Community Based Distribution Programmes in Other Countries

1. *The Indonesian Family Planning Programme*

In Indonesia, at Java-Bali, family planning was started in 1969 in a modest way as a clinic based programme. In 1970, it was realised that clinics alone could not reach the masses, and an additional staff of 160 field workers were attached to clinics in pilot areas, to go from house to house, advertising the availability of family planning services and encouraging people to control their family size by spacing pregnancies.

In 1975, Village Contraceptive Distribution Centres (VCDCs) were started which were full-fledged community family planning posts. These enlisted local volunteers to recruit and follow up acceptors and distribute pills and condoms. By June 1977, as many as 25,000 VCDCs had been set up, one for every village in Java and Bali.

An evaluation of the Indonesian programme in 1976 revealed a contraceptive prevalence rate (including new and continuing users), ranging from 4 per cent of married women of reproductive age in the outer islands to 32 per cent in both East Java and Bali. New contraceptive acceptors in 1976 represented 12 per cent of married women of reproductive age[6].

Between August 1973 and the end of 1974 about 35,000 had accepted the oral pill from the CBD programme. As of early 1975, an estimated 31,000 women or 8 per cent of the State's fertile age group were regularly using oral contraceptives. Further, well over half of all eligible couples had accepted family planning at some point of time during the eight years of the government programme (1969-77), and 24 per cent of all couples were protected in April 1977. As a result, the crude birth rate of 41 in 1968 declined to 20 by late 1977[7].

The Indonesian experience offers a unique example of the spread of the community based approach and its extension to other development sectors. The objective of covering sub-villages outlying the clinic is met through the village contraceptive depot. The group is led by a woman who is responsible for ensuring that clients are resupplied with pills and condoms and records are kept up-to-date. She also acts as a reference point for women with questions or complaints and refers them through the family planning chain to the clinic. This project has demonstrated that the CBD approach helps the family planning programme in two ways. First, the women in the village are no longer practising birth control in isolation, but have a close reference point. Second, there are preliminary data to reinforce the assumption that moving the contraceptive supply closer to the user will increase continuation[8].

2. *Community Distribution Programme, Columbia*

One of the first programmes to utilise influential or well- known citizens for the distribution of contraceptives began in the state of Risarlda in Columbia in 1970. The distributors were mostly small shopkeepers, teachers, housewives or heads of mothers' clubs who were given an initial training of one or two days. The incentives allowed were half of the amount realised by the sale of contraceptives like the oral pill, condoms and vaginal tablets. Acceptors with side effects were referred to Profamilia supervisors who, in turn, referred them to the clinic. The distributors also undertook some educational activities in the community but the major educational task rested with the supervisors[9].

The supervisors were selected from the area and trained by Profamilia at an intensive three-week course. In addition to recruiting distributors, they also made initial contacts with villagers. Each supervisor was responsible for distributors in 10 villages and visits each one of them every few weeks. While there, he held meetings, recruited and educated new acceptors, counselled drop-outs, resolved problems faced by the distributors, collected forms, and replenished the contraceptive supplies with the distributors.

After two years, this programme had provided contraception to 21 per cent of the women of fertile age in villages with distribution centres. About 95 per cent of the women were using oral pills, and the overall continuation rate at 12 months was 80 per cent. In 1974, the programme was operating through 370 distribution posts in six of Columbia's 22 states and had served about 12,400 families[10].

3. *Community Based Distribution in Rio-Grande Do Norte, Brazil*

This CBD project was first launched in Rio Grande Do Norte in North Eastern Brazil in 1973 with political and institutional support as well as the mobilisation of community resources. This innovative project aimed at providing free oral contraceptives by using community volunteers. Doctors trained in family planning were involved as the clinical component for assisting clients with complaints or side effects. All new clients were screened by trained community volunteers, and women in whom pill use was contraindicated were referred to the doctor for further medical examination. All new clients registered by the trained volunteers were given one oral contraceptive cycle. At subsequent revisits, complaints associated with contraceptive use were noted. The women were instructed in the correct use of the contraceptive and given the next date of issue or resupply. Those with complaints were referred to the doctor; the others received three cycles of pills and the visit was recorded on the revisit list.

It was observed that only 3.1 per cent of the clients presented contraindications and had to be referred to a doctor. Since its inception through May 1981, the project had reached 1,68,922 new clients and 769,290 revisiting clients[11].

4. *Community Based Distribution Programme, Sri Lanka*

The Sri Lankan programme was started in 1973 with the community based distribution of condoms. In 1975, oral pills were added to the programme. The programme is managed by the Family Planning Association of Sri Lanka. Oral pills and condoms are distributed under the brand names 'Preeti' and 'Mithuri' respectively trough marketing channels.

The country is divided into ten sales districts. Five of these are covered directly by the community based distribution network, and the remaining by the principal agent system. The latter channel operates through a van delivery system whereby principal agents deliver contraceptives along with other consumer goods to agents in urban areas. There are a few retail outlets in some rural areas but not adequate in number. In the former (CBD), commission agents have a certain number of sub-agents who supply contraceptive stocks along with other consumer goods to retail outlets including those in rural areas by van. In rural areas, the sub-agents who are appointed, are the only dealers in the area.

In order to make the products more popular, they are also distributed through 45 retail outlets of multipurpose co-operative societies. In addition, there are vendors who carry supplies—both Preeti and consumer goods—to rural outlets on motorcycles or cycles.

The Field Promotion Officer is the key link between the project administration and the commission agents as well as the retailers. He visits them periodically to survey the stock and supply position, and attends to problems encountered by the agents or sub-agents.

During the first half of 1980, the CBD network was able to sell 8,80,803 pieces of Preeti and 57,922 pieces of Mithuri compared to 3,071,281 pieces of Preeti and 93,157 pieces of Mithuri sold by the principal agents[12].

5. *Household Distribution of Contraceptives in Rural Egypt*

Household distribution of contraceptives is based on the assumption that there is an unmet demand for contraceptives in the community and that this demand can be identified and met in a culturally acceptable way by using lay people as distributors. Once the community has been systematically exposed to family planning information and services, a community based resupply system can effectively meet the demand for family planning on a continuing basis.

Under this project, contraceptive distribution is undertaken by residents who are paid salaries. Initially, four cycles of oral pills were offered free to 15,000 couples of whom only 7071 (47.2 per cent) accepted them. Of these, 96.7 per cent were already using contraceptive methods; 31.7 per cent of previous non-users thus received the pill. In November 1977, a recheck made to ensure the use of the pill, revealed that although all the couples who had received it did not use it, programme impact was evident in terms of an increase in oral contraceptive prevalence from 19.1 per cent in February 1974 to 27.7 per cent in November 1974, a relative increase of 45 per cent.

The long-term success of the household distribution approach is highly dependent on the resupply system, including referrals for side effects and other fertility regulation methods. In this project, resupplies were made through the existing rural health units, but for outlying villages upto five kilometers from a health unit, a village resupply depot was established[13].

6. *Matlab Thana Project, Bangladesh*

In October 1975, the Cholera Research Laboratory of Bangladesh initiated a simple but extensive house-to-house distribution of pills and condoms in 125 villages in Matlab Thana, covering a population of 1,25,000. Eighty-four other villages with a population of 1,35,000 acted as 'control' villages. Oral contraceptives and condoms were supplied free of cost by housewives specifically selected for canvassing and distribution.

The primary purpose of the project was to test the hypothesis that improved availability would increase contraceptive use. Within three months of distribution of the pill, the current use rate rose from a baseline level of one per cent to about 17 per cent. However, after twelve months, it came down to 15 per cent and at 18 months to 8.7 per cent[14].

The project's experience has shown that mere access to the pill is not associated with a persistent high acceptance rate. To make its non-clinical distribution genuinely effective, adequate back-up services must be organised to take care of complications and side effects as they arise. It was felt that an increase in pill use would occur if combined with the provision of other positive health measures[15].

The declining use prevalence rates were due both to the declining rate of new acceptors as well as the falling rate of method continuation over time. The initial surge of usage thus not only failed to generate sufficient additional demand but also failed to adequately satisfy the existing demand. Two years after its initiation, the project was restructured and manned by better educated and better trained field workers, backed by an adequately trained supervisor, clinic facilities were upgraded, and additional facilities for health care including maternal and child health were provided. Since then, the rate has been steadily increasing, reaching about 30 per cent at the end of one year[16].

7. *Planning Familial a Domicile (PFAD) Project, Tunisia*

In 1976, the PFAD project was started by the National Office of Family Planning and Population fax Governorate. It consisted of the household distribution of free oral contraceptives (7 cycles and resupply of 9 cycles), utilising local young women. Referral services were also arranged for IUD and female sterilisation. The ultimate supply points were clinics and nurse hygienists for a population of about 40,000. The evaluation design included service statistics/client records and an evaluation survey. The services provided included orals, condoms, referrals for IUD and sterilisation.

After one year, contraceptive prevalence among married women in the reproductive ages increased from 5.9 per cent to 15.3 per cent. It was observed that the introduction of the IUD and tubal ligation further increased family planning prevalence by all methods[17].

8. *Family Planning Outreach Project, The Philippines*

The project was launched in January 1977. Full-time outreach workers or FTOWs constitute the peripheral, trained, paid workers of the project. They are supervised by District Population Officers (DPOs) with a ratio of about five or six FTOWs per DPO, on average. The DPOs, in turn, report to Provincial or City Population Officers. Approximately 135 provinces and cities are covered by the outreach project.

The peripheral supply points are the Barangary (village) service points (BSP), manned by trained volunteer workers called BSP officers (BSPO). Through the BSPOs, oral pills and condoms are supplied to the acceptors.

The performance of the project was quantitated by conducting community outreach surveys. It was observed that 700 married couples of reproductive age were contacted against a target of 2000 couples per FTOW per year. Further, in BSP areas, the family planning prevalence rate for sterilisation, IUD and the pill increased from 11.4 per cent in 1978 to 14.1 per cent by 1980. However, for condoms it was 6.2 per cent[18].

9. *Community Based Family Planning in Malaysia*

The Malaysian programme started with the concept that family planning alone cannot be the answer to fertility decline and the total needs of the family have to be considered. Thus, the project was based on the theme 'My beloved family' and represented a total family development project. It was initiated by the National Family Planning Board (NFPB) together with the Japanese Organisation for International Cooperation in Family Planning (who had sponsored a deworming project in the Federal Territory of Kuala Lumpur city).

Very soon it was realised that deworming alone without the complimentary environmental and social measures, would not succeed. Hence, the idea of a more comprehensive approach was proposed to the Ministry of Federal Territory resulting in the present three-pronged approach to improve the conditions of the urban poor. The main objective was to improve the quality of life of the underprivileged urban population through a multidisciplinary approach in the provision of social amenities and services, to create awareness in the community, and to encourage community participation. Therefore, the project was not a new set of activities added to existing ones but a co-ordinated framework whereby current development activities could be related, resources could be shared, and talents could be channelised to respond more effectively and dynamically to the needs of poor, urban families in the Federal Territory area[19].

This project was implemented jointly by the people and the government. People as individuals and families participated through community organisations which were involved in identifying needs, determining objectives, mobilising community resources and arriving at the means to solve problems. The government worked through its existing agencies and in conjunction with various private and voluntary organisations; as many as 20 agencies were thus involved.

The Ministry of Federal Territory is in charge of the overall co-ordination of the programme through an inter-agency Steering Committee at the policy level; the NFPB Director-General is the Co-chairman.

Community Based Distribution Projects in India

Till recently, the Indian family planning programme had been more oriented towards sterilisation through clinics and hospitals. However, realising the need for expanding the use of spacing methods as well as the role of community participation in such an effort, some organisations began to experiment with the community based distribution of contraceptives by integrating it with other basic primary health care activities. Only a few such programmes have been carried out in India and are reviewed below.

1. *Integrated Rural Project for Family Planning, Allahabad*

This project was sponsored by the Family Planning Association of India. Started in 1971 in co-ordination with the Rural Agricultural Institute, Allahabad, it linked family planning with agricultural activities in over 80 villages in the Jamnapur area of Allahabad district. The total population covered was about 1,60,000.

The project depended almost exclusively on its field teams consisting of a male agricultural extension worker and a female auxiliary nurse midwife (ANM). The male worker distributed condoms to the men and offered agricultural advice and assistance. The ANM distributed oral contraceptives to the women. They recruited and screened acceptors according to the criteria established by the project, followed up each acceptor and provided contraceptive supplies. Each field worker covered a population of 20,000.

In four years, this project was able to provide contraceptive services to 3,500 couples. It also demonstrated the effectiveness of integrating agricultural activities with family planning programmes[20].

2. *Community Based Distribution Programme, Howrah*

Community based distribution of contraceptives was started in 1977 in 26 community development blocks of Howrah district in West Bengal state[21]. Each block was subdivided into ten units covering a 10,000 population, each with a contraceptive supply depot. The depots were staffed by depot holders appointed from among the local community and trained to motivate and recruit acceptors by visiting all eligible couples in its area.

Pills were distributed at the depots, and a simple registration system designed to facilitate follow-up for women who do not return for re-supply was maintained. Referrals were made to Primary Health Centre when necessary. Supervisors were appointed to handle ten depots, assist depot holders and provide on-site training. The project was found to successfully meet the district's family needs, community involvement being the key to its success.

3. *Community Based Project, South Kanara District, Karnataka*

Through this project, 301 distribution outlets were established to cover the entire district[22]. Trained local women served as depot workers in charge of the outlets. There was one supervisor, who is a paid worker, per ten depot workers. The depot worker received two weeks' training in family planning methods, marketing and record keeping procedures. The supervisors were trained for one week in family planning methods, marketing and management. Orientation training in the field was provided to these personnel every six months.

Apart from contraceptives, community based services for menstrual regulation were provided through 75 rural medical practitioners who were also trained in family planning methods and in performing the Menstrual Regulation (MR) procedure.

4. *Nirodh Marketing Programme and Depot Holder's Scheme, Government of India*

The family planning programme of the Government of India, which widely popularised the sterilisation approach, initiated a programme to popularise the spacing methods in 1978. The idea was to increase the existing number of outlets for the delivery of condoms. The distribution of these contraceptives was envisaged in terms of a "social marketing" approach. According to Vikramajit[23] "social marketing" is a "design, implementation and control of programmes seeking to increase the acceptability of a social idea, cause or practice in a target group. It utilises market segmentation, consumer research, concept development, communication, facilitation, incentives and exchange theory to maximise target group response—.

Thus, the present approach envisaged promotion, distribution and sale of condoms to the consumer through existing sales outlets at a relatively low subsidised price in order to meet the social objectives by motivating clients to accept the condom (Nirodh) as a method of family planning and also to maintain high continuation and use effectiveness rates.

The commercial Nirodh programme was launched in September 1978. Six major consumer goods marketing companies entered into a unique collaborative venture with the Government of India to organise commercial distribution and sales of Nirodh through retail outlets all over the country. The six companies were Brooke Bond, Hindustan Lever, India Tobacco Co. (ITC), Lipton, Tata Oil Mills and Union Carbide. Their combined efforts provided the Government with a highly effective distribution network which had the potential reach of 300,000 outlets. The Government also took the view that the development of a mass market for Nirodh would require special efforts in the area of consumer motivation.

Several different types of outlets are available for stocking Nirodh namely, grocers, general stores/toiletries, chemists, cigarette shops, petrol stations, railway stalls, tea shops, numbering about 350,000 throughout the country.

With a view to rapidly popularise the acceptance of Nirodh particularly in rural areas, a Depot Holder Scheme is also being launched in a phased manner since April 1981. This scheme, initially started in the states of Gujarat, Haryana and Uttar Pradesh, was subsequently extended to Maharashtra, West Bengal, Orissa and Madhya Pradesh[23].

Under this scheme, depot holders supply Nirodh to users at the rate of 50 paise per packet of six pieces and retain the entire sale proceeds as an incentive. The scheme is operated through Village Health Guides (Community Health Volunteers) and Multi*Purpose Workers. Even though the programme started with the marketing of ordinary condoms, the social marketing approach currently covers the sale of a 'Deluxe' brand of Nirodh as well.

5. *FPAI Varanasi Community Based Distribution Project*

The leading, national voluntary organisation in the field of family planning, the Family Planning Association of India (FPAI) and a renowned educational institution, Banaras Hindu University combined their efforts to operate the FPAI Varanasi Community Based Distribution Project wherein the technical implementation came from BHU and financial assistance was provided by FPAI. The project was launched in October 1979 and operated in one of the most backward areas of the country with a population of 1.2 million spread over eight Community Development Blocks in an area of 1465 km. covering 1242 villages in Uttar Pradesh. The CBD approach adopted in the project is as detailed below.

The distribution of contraceptives was through specially trained volunteers called "Sanyojaks" or depot holders who were chosen on the basis of certain criteria, among them their willingness to work with the project and a certain minimum educational qualification required for record maintenance, follow-up and management of side effects. Certain general criteria such as social background, acceptability by the community, some assured income and motivation for social service were also considered before the community made the selection.

Some depot holders only distributed the oral pill while others distributed both the pill and the condom. However, all were encouraged to motivate couples to accept other available contraceptive methods according to their choice. A comprehensive training programmes was conducted for the depot holders by the project staff in the villages. Continuous on-the-job training followed by periodical refresher courses was also provided.

The organisational set-up of the project consisted of an Honorary Director, assisted by a Project Co-ordinator and an Honorary Medical Consultant. Under this apex, there was a three-tier staffing system of Project Assistants, Field Supervisors, and Field Assistants. The former were headquarters' staff of a specialised cadre, each looking after a particular component of the programme such as field operations, education and training, evaluation and statistics, women's development etc., in addition to being responsible for the training of depot holders, maintenance of supplies; organisation of educational activities and ensuring records and returns from the field to the headquarters. The depot holders screened potential acceptors for the pill on an "acceptor card" on the basis of a checklist printed on the card. Those found suitable were examined at clinics conducted at the village by medical personnel who confirmed the absence of any contraindications and prescribed its use. These pill acceptors were followed up by depot holders for any side effects and for further supplies; the depot holders maintained stocks of oral pill supplies. However, condoms and Neo Sampoon foam tablets were directly distributed by them without a doctor's examination.

IUD (Copper T) insertions were also carried out by the medical personnel at the village level while sterilisation facilities (tubectomy and vasectomy) were provided at the District Hospital and University Hospital on a referral basis. The depot holders also distributed certain selected items of primary health care provided to them by the project in addition to family planning services. These items were carefully selected as per the demands and needs of the community. Project performance was constantly monitored by a system of record keeping developed to review progress.

A three-tier supervision and support system existed at the field level. At the depot holder's level, acceptor cards and stock and supply records were maintained. Project activities were monitored through fortnightly detailed reports of field activities, case study reports as well as stock and supply records maintained by the field staff. The Field Assistants also maintained a register containing various demographic particulars of their area as well as of family planning acceptors recruited by each depot holder. The depot holder entered information regarding the registration of cases, distribution of supplies, side effects and their management (for orals) on each acceptor card. This was closely supervised by the Field Assistants and the Medical Officers during their regular visits to the villages. Every acceptor was interviewed by the Field Assistant at regular intervals for any side effect, and for ensuring resupply and regular use of the chosen contraceptive. The Field Supervisors and headquarters staff visiting the field were also required to check-up the acceptors on a random basis during their field visits.

Supervisor level meetings with headquarters staff were held fortnightly to review the difficulties encountered in the field - problems of motivation, follow-up, supplies, organisation of educational and sterilisation camps, women's development and rural development activities. Monthly meetings for Field Assistants helped review the previous month's performance. Any new guidelines evolved were intimated to them at these meetings. A third level review was made by the project committee which met every three months to lay down policy guidelines for the project.

A systems analysis of this project revealed that there is a great potential in the system for distribution of contraceptives through depot holders and that they can motivate their clients well for clinical methods also. It also suggested that the system should give due emphasis to supportive activities like the organisation of periodical refresher courses for depot holders, emphasising on case motivation and follow-up with adequate supervision by duly qualified staff. Further, process variables like general meetings and group discussions should form the core of motivational methods, and due consideration should be given to dynamic variables such as the size of the population to be covered by a depot holder (preferably around 3000) and the proximity of supervisory staff (who should stay nearer to them and be changed every 2-3 years to avoid routinism).

Static variables such as the sex of the depot holder or Field Assistant definitely influences the output influencing the methods applicable to the particular sex. The depot holder should be selected with due emphasis on his interest in the job, social work background and standing in the community irrespective of his age, caste or educational qualifications. The integration of family planing activities with other primary health care programmes especially those related to the mother and child like the provision of oral rehydration salts during diarrhoea or delivery packets, improves overall programme output. It is also beneficial to involve community agencies like youth clubs or village health committees in the system.

The analysis further indicated that the elements of the various sub-systems relating to the providers of the service were more important than those related to eligible couples in effecting the output[24].

CONCLUSION

The community based distribution projects reviewed above amply emphasise the fact that local volunteers, lay people or formal leaders of the community can be utilised for proper contraceptive distribution in the CBD set-up. They stress the appointment of influential persons, persons with proven interest in social work from the community, as depot holders in order to achieve high levels of performance. However, they also emphasise adequate supervision for better performance, and efficient back-up services to take care of the side effects of oral pills and give good continuation rates.

Further, the projects demonstrate the need for integration of family planning activities with other positive health measures as well as total family development as a key to enhanced achievement in CBD programming. The benefits of integrating community level groups have also been amply highlighted by these project experiences.

The above project experiences as well as the concepts of community based distribution therefore suggest that the involvement of community agencies will definitely yield better results in the area of family planning.

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MANAGEMENT INFORMATION SYSTEM IN FAMILY PLANNING PRACTICE : AN EVALUATION

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The Indian family planning programme, as a sub-system of the health system, has many sub-systems such as the manpower sub-system, training sub-system, information sub-system and so on. The management information system is a major link in this chain as it provides important information on which the planning, implementation and monitoring of the progress of the programme are based. In other words, the management information system is closely related to the progress of family planning.

In the management information system, the eligible couple register is the main document for organising the work programme of family planning workers. This register, maintained by the multipurpose health worker (MPW), is supposed to be an effective instrument for monitoring and managing the programme, and an important source for improving information on vital statistics. Moreover, for planning, implementation and monitoring the progress of the programme, it is essential for programme managers to not only have correct baseline information on these variables but also a regular flow of updated information.

OBJECTIVES

There are about 126 million couples in the country, a number which is likely to increase to around 170 million by 2000 A.D. It was therefore considered worthwhile to evaluate this information system in order to ensure that the programme is moving on the right lines and produces the desired results. With this purpose in view the present paper is an attempt to evaluate the Eligible Couple Register system in the state of Haryana.

The main objectives of the study were :

1. To assess the status of maintenance and updating of eligible couple registers by health workers.
2. To evaluate the use of eligible couple registers by the multipurpose health workers (MPWs) in the family planning programme.
3. To understand the problems and difficulties experienced by MPWs in the collection and compilation of these statistics.

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METHODOLOGY

The study was conducted in the state of Haryana. Two primary health centres (PHCs) were randomly selected from two districts of the state namely, Sonepat and Bhiwani, which in turn, were selected on the basis of their family planning performance. Thus, the Ganaur and Gohana PHCs were selected from district Sonepat and the Miran and Kairu PHCs from district Bhiwani. In all, 133 multipurpose health workers (MPWs)—68 male and 65 female—formed the sample for this study.

It was planned to take 16 teams of MPWs (male as well as female) from each PHC and ultimately 133 MPWs were contacted for the study. The data was collected through an interview schedule and the respondents were mostly interviewed in the PHC; some of them who could not come to the PHC were interviewed at their work place.

RESULTS AND DISCUSSION

The large majority of the MPWs were married. Age-wise, male MPWs were comparatively older—in the range of 30-39 years—than female workers who were about 20-24 years. Correspondingly, male MPWs possessed a comparatively longer work experience than did female workers. The data further indicated that the average population covered by the male workers was higher (6750 persons) as compared to that covered by their female counterparts (4730 persons).

Eligible Couple Survey

The eligible couple survey collects information regarding age, number of children and other related aspects from eligible couples in the age group of 15-45 years living in a designated area (for the purpose of motivating them to accept a family planning method).

When asked to state the purpose of maintaining an eligible couple register, the identification of eligible or target couples for family planning was stated as the main objective by most of the respondents. However, fewer than a fourth of the respondents also mentioned the identification of children and women requiring immunisation and the number of couples who practice contraception, as objectives.

Whereas the MPWs are required to conduct a fresh survey every year to update this information, only 10 per cent were found to conduct an independent annual survey and to regularly update their registers. The majority (58 per cent) obtained this information from population survey records, although some of them indicated that they verified this information during their field visits. It is thus apparent that instead of conducting a fresh survey every year, the MPWs were merely depending upon population survey data for updating their eligible couple registers. Although similar information is collected in population surveys, there is always the possibility of there being some discrepancies in data, especially when the data has not been verified. The remaining MPWs (32 per cent) claimed that they updated their registers only when they went for field visits or as and when an event was reported.

Updating of information was done by more MPWs in Sonepat district than in Bhiwani district. However, among the MPWs who updated the eligible couple records, two-thirds did so by visiting the individual/couple; the remaining updated them by asking other knowledgeable persons or village dais etc.

As many as 90 per cent of the respondents stated that they had received eligible couple registers from the PHC; the remaining had not been able to get them due to a shortage of supplies, and were using ordinary registers for maintaining these records.

Briefly then, the data show that the MPWs do not pay adequate attention to the collection and compilation of this very important source of information.

Population Survey

Another source of information for MPWs is the Population Survey Register which the MPWs are expected to maintain and update regularly. However, when asked about the purpose of these registers, a large majority of MPWs (83 per cent) stated that they are maintained in order to know the size of population. Forty-seven per cent stated the identification of the health needs of the people, and assessment of the number of eligible couples (36 per cent) and number of children in different age groups as additional purposes. This indicates the limited perception of MPWs regarding the utility of population surveys. In fact, the real motive of the survey that is, to identify the population parameters of the area was not mentioned by a single health worker.

The MPWs are expected to maintain records of population parameters in a special register. Our inquiry showed that all but 23 (17.29 per cent) respondents had been given registers whereas the rest could not get them due to a short supply. However, they had been recording this information in their own registers, and all were maintaining population survey registers. It was further observed that 88.7 per cent conducted annual surveys though only 35.6 per cent updated the information on all items or conducted a fresh survey. Seventy per cent of the latter MPWs carried their register to the field and made on-the-spot entries. The remaining only noted the events and entered them in the register later, thereby allowing for mistakes and recall lapses. As far the source of information is concerned, 80 per cent had approached the head of the family or any other member of the household while the remaining collected this information from neighbours and others. This shows that although a fairly high percentage of the MPWs were collecting information from the head of the household, a significant proportion were not very serious about this aspect of work. Their major thrust was on the collection of information irrespective of the source.

Difficulties in data collection

The MPWs reported two types of difficulties encountered by them during the course of data collection—first, those related to the field situation, and the second, to non-cooperation of the respondents in giving information. While 45 per cent faced difficulties in contacting the respondents due to their non-availability at their residence, about 50 per cent mentioned non-cooperation and giving wrong information deliberately or unknowingly regarding age, number of children, pregnancy status of women etc. More than 50 per cent of the MPWs claimed to have reported these problems to their seniors who in most cases did not do anything about them.

A physical examination of the registers revealed that although the majority of the MPWs had made the entries in a systematic manner, some columns such as the date of follow-up visit, or information relating to family planning, the number of children below six, were found to be blank. In short, those items which require probing in order to elicit correct information, and which needed to be updated regularly were neglected. As a result, a great deal of valuable information was missed by the MPWs.

It is true that the MPWs face certain difficulties in the process of data collection. However, if they themselves cannot solve the problems, they are expected to bring them to the notice of the authorities so that they are rectified; over half of them had reported their problems to their seniors, as mentioned earlier, but no assistance had been forthcoming. However, when asked to give suggestions to improve the system, the large majority had nothing to say, implying that they were either fully satisfied with this procedure or were indifferent and doing this work in a highly mechanical manner. The only suggestion that came from some MPWs (10 per cent) was that the size of the register should be reduced so that it could be easily carried during the field visits.

CONCLUSION

On the whole, it seems that the maintenance of eligible couple and population survey registers which are important sources of information is not given top priority. The MPWs have a comparatively clear perception of the objectives of the eligible couple register but the same cannot be said of the population registers. A significant proportion of the MPWs do not update the information in the prescribed manner and have a rather casual attitude towards this aspect of work. There is also no formal programme of updating the information in the registers.

In conclusion, the basic information on population parameters on which is based the entire planning and implementation of the programme is not being paid due attention. Equally important is the updating of such information which is also not being taken very seriously. Comparatively greater attention is paid to data collection rather than to data utilisation. It is therefore recommended that the regular and timely supply of registers should be ensured, and greater stress laid on the updating of information by collecting information from the proper source. Since population survey records are being used to update eligible couple records, it would be better to maintain only one register which will cover all aspects. This would reduce the workload of the workers and the quality of data would also improve. The registers may also be reduced to a manageable size so that they can be carried to the field and entries made directly in them.BBm.

Orientation programmes should be organised from time to time to improve the quality of data.

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DEMOGRAPHIC FEATURES OF TUBECTOMY ACCEPTORS IN GOA

DR. SAVITA CHANDRA*

INTRODUCTION

Female sterilisation still remains the most popular method of fertility control in India because of its two major advantages of being cost effective and a one-time method not requiring sustained motivation or follow up. Each voluntary sterilisation is estimated to avert 1.5 to 2.5 births[1,2].

OBJECTIVES

This study aimed at analysing selected characteristics of female acceptors who underwent sterilisation in the Obstetrics and Gynaecology Department of Goa Medical College with a view to note any outstanding features which may help accelerate family planning acceptance.

DATA

The data were collected from the records maintained by the post-partum project of the Department, of tubectomy acceptors who underwent tubal ligation over the five-year period from 1st January 1986 to 31st December 1990. The data were then compiled and analysed with respect to age, parity, religion, literacy, motivational status, and sex composition of children at the time of sterilisation.

During the specified five-year period, a total of 3202 tubectomies were performed with 12,775 deliveries, giving a tubectomy to delivery ratio of 1:3.98.

RESULTS AND DISCUSSION

The following paragraphs highlight the main findings of the study.

Age

The overall mean age over the five-year period was 30.13 years, with the lowest being 29.78 years in 1988. The highest number of acceptors belonged to the 25-29 age group (36.9 per cent) followed by those aged 30-34 (35 per cent). Thus, almost three-fourths (72 per cent) of the acceptors were between 25-34 years.

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The number of acceptors in the 20-24 age group showed a significant doubling from 5.94 per cent in 1986 to 13.82 per cent in 1990 reflecting a tendency to complete family size at a young age.

TABLE 1

Distribution of acceptors by age

Year	Total acceptors	Age in years						Mean age at acceptance (years)
		18-19	20-24	25-29	30-34	35-39	40-44	
1986	639	1	38	230	238	106	26	30.84
		(0.2)	(5.9)	(36.0)	(37.2)	(16.6)	(4.1)	
1987	700	–	57	241	254	120	28	30.72
			(8.1)	(34.4)	(36.8)	(17.1)	(4.0)	
1988	640	–	77	252	207	86	18	29.78
			(12.0)	(39.4)	(32.3)	(13.4)	(2.8)	
1989	630	–	76	221	224	99	10	29.98
			(12.1)	(35.1)	(35.6)	(15.7)	(1.6)	
1990	593	–	82	240	198	55	18	29.37
			(13.8)	(40.5)	(33.4)	(9.3)	(3.0)	
Total 1986-90	3202	1	330	1184	1121	466	100	
			(10.3)	(37.0)	(35.0)	(14.6)	(3.1)	

Figures in brackets denote percentages.

Parity

Table 2 shows that the overall average number of children of the acceptors at the time of sterilisation was 3.04; 3.34 in 1986 falling to 2.94 in 1990. Overall, over the five-year period, about one-fourth (26.6 per cent) of the total acceptors had two or fewer children whereas over two-fifths (42.1 per cent) had three children.

Over the five-year period studied, we have already seen a trend among couples to accept sterilisation at young ages. That sterilisation is being accepted by low parity couples is shown in Table 2: while women with two or fewer children constituted 18.8 per cent of the acceptors in 1986, they formed as much as 33.9 per cent of the acceptors in 1990. Again, couples with three children remained almost unchanged (around 41 per cent of the acceptors in both 1986 and 1990) whereas those with four and five children declined from 39.9 per cent of the acceptors in 1986 to 22.9 per cent of the acceptors in 1990. Notably, those with five children recorded as much as

TABLE 2

Distribution of acceptors by parity

Year	Total cases	Parity 1	2	3	4	5	Mean no. of children
1986	639	9 (1.4)	111 (17.4)	264 (41.3)	159 (24.9)	96 (15.0)	3.34
1987	700	18 (2.6)	154 (22.0)	285 (40.7)	168 (24.0)	75 (10.7)	2.99
1988	640	18 (2.8)	161 (25.2)	274 (42.8)	131 (20.5)	56 (8.8)	2.85
1989	630	7 (1.1)	165 (26.2)	277 (44.0)	127 (20.2)	54 (8.6)	3.08
1990	593	9 (0.1)	201 (33.9)	247 (41.7)	94 (15.9)	42 (7.1)	2.94
Total 1986-90	3202	61 (1.9)	792 (24.7)	1347 (42.1)	679 (21.2)	323 (10.1)	3.04

Figures in brackets denote percentages.

a 50 per cent decline from 15 per cent in 1986 to 7.1 per cent in 1990.

Khorana[3] found that no couple had less than four children and 41 per cent had 7 to 9 children, thus leading more to a statistical addition to the tubectomy numbers rather than contributing towards effective population control. In other words tubectomy was accepted but the "damage" had already been done. Jamshedji et al[4] reported the mean parity as 3.9 with only 19 per cent having less than three children. In the present study then, both the parameters—age and parity—reveal that tubectomy has been accepted by two-thirds of the women at a relatively young age and with fewer children.

Religion

The acceptors were either Hindu; Muslim or Christian with twelve cases other than these (Table 3).

Overall, Hindus constituted the majority (76 per cent) of the total sample followed by Christians (13.1 per cent) and Muslims (10.6 per cent). This is in agreement with the general pattern of tubectomy acceptors observed in the state of Goa[5] where during 1988-89, Hindus comprised 79 per cent, Christians, 12.9 per cent and Muslims, 8.1 per cent of the tubectomy acceptors.

A lower acceptance by Muslims and Christians of 7.7 and 4.6 per cent respectively has been reported by Jamshedji et al[4], while no Christians

TABLE 3

Distribution of acceptors by religion

Year	Total cases	Hindu	Muslim	Christian	Others
1986	639	532 (83.3)	37 (5.8)	67 (10.5)	3 (0.5)
1987	700	549 (78.4)	70 (10.0)	79 (11.3)	2 (0.3)
1988	640	478 (74.7)	77 (12.0)	83 (13.0)	2 (0.3)
1989	630	455 (72.2)	77 (12.2)	95 (15.1)	3 (0.5)
1990	593	419 (70.7)	78 (13.2)	94 (15.9)	2 (0.3)
Total 1986-90	3202	2433 (76.0)	339 (10.6)	418 (13.1)	12 (0.4)

Figures in brackets denote percentages.

accepted sterilisation in Khorana's[3] study. Dutta et al[6] recorded 3.1 per cent of Muslims and 1.9 per cent of Christians in their study of tubectomy acceptors. Thus, in this study, Muslim and Christian communities have shown a better acceptance of tubectomy.

Literacy

The overall average literacy status of the couples was 58.7 per cent - wives: 54.3 per cent and husbands: 63.1 per cent. About 36.8 per cent of husbands were illiterate as against 45.7 per cent of the wives (Table 4).

Across the five years studied, the proportion of literate tubectomy acceptors and their husbands increased from 53,2 and 49.3 per cent respectively in 1986 to 66.6 and 54.3 per cent respectively in 1990. The illiterate among the acceptors showed a concomitant decrease. Educational levels either during the five-year period or between husbands and wives in each year did not change appreciably except in the case of graduate acceptors who declined from about 15 percent (both husbands and wives) in 1986 to about 5 per cent in 1990.

Mehta et al[7] found 61 per cent of their tubectomy acceptors to be illiterate, while at the all India level[8] 49.5 per cent of tubectomy acceptors were *illiterate;* 15.3 per cent had achieved primary school education and only 10 per cent had attained middle school education.

TABLE 4

Literacy status among acceptors

Year	Total Cases	Illiterate		Literate		Primary		Middle		High School		Graduate		Total Literate Couples (%)
		Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife	
1986	639	299	320	340	319	130	133	74	64	85	73	51	49	51.3
		(46.8)	(50.1)	(53.2)	(49.3)	(38.2)	(41.7)	(21.8)	(20.1)	(25.0)	(22.8)	(15.0)	(15.4)	
1987	700	250	318	450	382	141	143	146	96	129	97	34	46	59.4
		(35.7)	(45.4)	(64.3)	(54.6)	(31.3)	(37.4)	(32.4)	(25.1)	(28.7)	(25.4)	(7.6)	(12.0)	
1988	640	220	285	420	355	123	120	133	108	129	102	35	25	60.5
		(34.4)	(44.5)	(65.6)	(55.5)	(29.3)	(33.8)	(31.7)	(30.4)	(30.7)	(28.7)	(8.3)	(7.0)	
1989	630	213	280	417	350	107	99	144	125	118	87	48	39	60.9
		(33.8)	(44.4)	(66.2)	(55.6)	(25.7)	(28.3)	(34.5)	(38.9)	(28.3)	(27.1)	(11.5)	(12.1)	
1990	593	198	261	395	332	145	124	152	128	81	60	17	20	61.3
		(33.4)	(44.0)	(66.6)	(56.0)	(36.7)	(37.3)	(38.5)	(38.6)	(20.5)	(18.1)	(4.3)	(6.0)	
Total 1986-90	3202	1180	1464	2022	1738	646	619	649	521	542	419	185	179	58.7
		(36.8)	(45.7)	(63.1)	(54.3)	(31.9)	(35.6)	(32.1)	(30.0)	(26.8)	(24.10	(9.1)	(10.3)	

Figures in brackets denote percentages.

Motivational status

Motivation is the most difficult programme element and requires sustained efforts. Nevertheless, the present study shows a very encouraging trend in the self-motivational status of the acceptors. Whereas only 17.5 per cent of the tubectomy acceptors in 1986 were self-motivated, an impressive 82.3 per cent reported self-motivation in the 1990 sample. Motivation by others showed a concomitant decline. This is a favourable trend reflecting improved awareness and ready acceptance of tubectomy.

On average, over the five-year period, over half or 56.1 per cent of the acceptors came on their own for the sterilisation and the remaining 43.9 per cent did so following motivation by others.

Children of same sex

In 1986, about 16 per cent of the tubectomy acceptors had children of one sex only compared to 24.6 per cent in 1990, and 21.3 per cent during 1986-90, indicating that an increasing number of couples are coming forward to accept a terminal method despite having children of one sex only. As seen from Table 5, a total of 682 acceptors had children of one sex only. Of these, 444 (65.1 per cent) had male children only and 238 (34.9 per cent) had only female children.

TABLE 5

Acceptors with children of one sex

Year	Total acceptors	Acceptors with children of one sex only	Acceptors with male children only	Acceptors with female children only
1986	639	102 (16.0)	65 (63.7)	37 (36.3)
1987	700	147 (21.0)	107 (72.8)	409 (27.2)
1988	640	144 (22.5)	102 (70.8)	42 (29.2)
1989	630	143 (22.7)	80 (55.9)	63 (44.0)
1990	593	146 (24.6)	90 (61.6)	56 (38.3)
Total 1986-90	3202	682	444 (65.1)	238 (34.9)

Figures in brackets denote percentages.

However, the difference between proportions of acceptors with male only and female only children while showing fluctuations from year to year has maintained a clear preference for sons. Thus, the terminal method is more readily accepted when the couple has male children only than when they have female children only.

In their study Mehta et al[7] observed that only 12 per cent of tubectomy acceptors had children of one sex only compared to 21 per cent in this study. Also, there were only two per cent of acceptors who did not have a male issue, compared to 7.43 per cent in this study. Hence, couples having only female children have accepted tubectomy—this is an important feature of this data.

CONCLUSION

The study reveals many favourable points. In the absence of earlier studies conducted in the same area however, it has not been possible to make a comparison to note changing trends over the previous years. Nevertheless, tubectomy is observed to be accepted at a young age (average 30.1 years) with 67 per cent of acceptors having two or three children. Over half or 56.1 per cent of the acceptors are self-motivated and 21.2 per cent have children of one sex only. The trend towards young age and low parity couples as also towards self-motivated couples is also suggested across the five-year period covered by the study. Acceptance amongst Muslims and Christians is better but needs to be improved further although both communities have shown an increasing trend towards tubectomy acceptance.

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SEXUAL BEHAVIOUR OF URBAN, EDUCATED INDIAN MEN: RESULTS OF A SURVEY

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and
DR. C.R.SRIDHAR**

INTRODUCTION

Since Kinsey's epic 1948 study on the sexual behaviour of men and women in the USA, many surveys on the actual patterns of sexual behaviour have been conducted in the West. However, no such study has been undertaken in India, and there is no literature on sexual behaviour patterns of the Indian population. There are several beliefs and suppositions which have guided those working in related fields such as family planning, STD control, and so on. For example, many tend to believe that there is no homosexual behaviour or extramarital sex in India, and therefore India will not have to face the menace of AIDS.

The need for actual data on sexual behaviour patterns has never been of such crucial importance as it is today. With STDs including AIDS affecting a larger and larger number of people, it is essential that good educational campaigns be developed. And, in order to design suitable communication tools, it is essential to have a knowledge base on actual sexual behaviour.

OBJECTIVES

Given the sensitivity of the topic and the general "do-not-talk-about-such-things" attitude prevalent in Indian society, sexual behaviour has not been studied at a national level as in the West. This survey of sexual behaviour patterns then was undertaken primarily to begin the process of discussion and more research on the subject, and to help develop a more open attitude amongst those working in related fields. Further, it was hoped that by bringing forward the reality of sexual behaviour patterns, the attitudes of shame, guilt and hypocrisy which exist in our society could be countered by a more fact-based, quantitative understanding of reality. And finally, it was felt that the findings of this survey would help remove existing myths and beliefs regarding sexual behaviour, and contribute to the growing

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discussion on sexual behaviour patterns internationally.

METHODOLOGY AND SAMPLE

The study employed a self-administered magazine questionnaire which was developed and pretested twice before the final version was published in the June and July 1991 issues of *Debonair*, a men's magazine published from Bombay, and having a circulation of 85,000 nationwide. The questionnaire appeared as a four-page spread in the June 1991 issue, while in the subsequent issue, only the questionnaire was repeated. The readers were given a month's time to respond to the questionnaire. The response was extremely good, with 1500 replies being received by July 30, 1991. The date of receipt was stamped on the questionnaires received at the *Debonair* Office in Bombay, prior to handing them over for analysis.

There are inherent limitations to this method of study. First, the questionnaire only reaches the readers of the magazine, who are already a subset of the population—educated and residing mainly in cities. Second, the responses are indicative of those types of individuals who have a propensity for answering questionnaires, possibly a more open group than the rest of the population. Nevertheless, the methodology of utilising questionnaires published in magazines is a legitimised form of studying sexual behaviour and has been used extensively internationally. Given the sensitivity of the topic, face-to-face interviewing can give wrong answers, since some people do feel extremely shy and nervous about such discussions and respond with "correct" answers, rather than disclose what they consider to be their inappropriate behaviour. The anonymity of such a self-administered questionnaire therefore, allows for a more free disclosure of certain behaviour patterns such as homosexuality, or extramarital sex.

Profile of the Sample

A total of 1520 valid responses were received. Interestingly, 67 were answered by women and the rest, that is 1453, by men, the target readership. Twenty-nine of the latter questionnaires were rejected because they were either inconsistent or incomplete. The remaining 1424 which constituted the sample, and represented 25 states in the country, were analysed.

A zonal representation of the sample indicated a slight bias towards the Northern and Western zones of the country, primarily a reflection of the distribution of the readers of *Debonair*. Thus, the highest proportion of responses (34.1 per cent) was received from the West zone, followed by the North (32.0 per cent), South (19.6 per cent), and East (11.5 per cent) zones; about 2.8 per cent did not specify the place of residence. While the four metropolitan cities of Bombay, Calcutta, Delhi and Madras accounted for 16.8 per cent of the urban readership, the bias of the responses was towards the metros in that if represented as much as 29.0 per cent of the sample.

Table 1 presents a socio-economic profile of the respondents—their marital status, age, religion, education, occupation and income.

About half (718 or 50.4 per cent) of the respondents were unmarried, 48.2 per cent (686) were married and a small fraction did not disclose their marital status. Of the latter, 661 were currently married, 4 were widowers, 16 had been divorced and/or separated, and 5 had remarried.

The majority of the respondents were from the sexually active age group with 76.5 per cent being between 20–34 years of age. All the religious communities were represented, with Hindus being in a majority. The respondents were all highly educated, over 78 per cent being college graduates and above. About two-thirds (64 per cent) of the respondents had been educated in co-educational schools, and 36 per cent in schools exclusively meant for boys. By occupation, they were primarily executives and businessmen, with a monthly personal income mainly in the middle income and upper middle income range.

TABLE 1

Socio-economic profile of the respondents

Characteristic			
Age (years)	% of unmarried respondents	% of married respondents	% of total respondents
Below 20	10.9	—	5.8
20-24	40.5	3.2	22.5
25-29	39.7	21.0	30.5
30-34	6.3	30.0	17.7
35-44	2.2	32.8	17.0
45-54	0.4	13.0	6.5
(N)	718	686	1424*
		% of total respondents N=1424	
Religion			
Hindu		79.2	
Muslim		4.8	
Christian		7.4	
Sikh		4.7	
Parsi		0.6	
Jain		1.4	
Others		0.6	
Not disclosed		1424	
(N)		1424	

TABLE 1 *(Contd.)*

Characteristic	% of total respondents N=1424
Education	
Some years in school	1.0
Passed school	3.7
Some years in college	5.9
Undergraduate	10.8
Graduate	36.3
Diploma	11.1
Postgraduate	30.8
Not specified	0.4
Occupation	
Unskilled worker	1.3
Skilled worker	5.3
Petty trader/Shop owner	0.7
Businessman/industrialist	15.2
Self-employed professional	14.3
Clerk/Salesman	7.4
Supervisor	0.7
Officer/Junior or senior executive	35.9
Retired/Other	0.4
Student	10.5
Agriculturist	0.1
Unemployed	0.4
Not specified	7.7
Monthly Income	
Below Rs.2000	14.2
Rs.2001-4000	34.1
Rs.4001-6000	20.2
Rs.6001-8000	8.4
Rs.8001-10,000	2.7
Rs.10,000 +	7.3
Not disclosed	13.1

* 20 respondents did not answer the question.

The respondents thus belonged to the middle and upper middle classes with a high level of education. The responses therefore are indicative of the behaviour of this class of society. However, it is usually presumed that this group has a more conservative attitude and behaviour than the so-called lower and upper classes. Whether this is true or not, this survey cannot answer.

However, given the central position of this social segment in the life of the country, it forms a crucial group for understanding sexual behaviour patterns, and for developing educational strategies.

RESULTS AND DISCUSSION

The following paragraphs present the findings of the survey, beginning with the source from which the respondents obtained knowledge about sex and then their actual sexual behaviour patterns.

Source of knowledge about sex

From where did the respondents get their knowledge about sex? Given the close-lipped attitude of most elders, it is not surprising that books (80.3 per cent) were the primary source of such knowledge followed by friends (63.2 per cent). Parents (3.9 per cent) and school (12.4 per cent) did not play a significant part in providing such information. The new wave sex films as an important source of sex information was reflected in the responses—movies constituted a significant (34.1 per cent) source.

Masturbation

There are strong social taboos against masturbation—the male is often told that it leads to sickness and inability to perform. Further, if indulged in, masturbation is often accompanied with a sense of guilt, and many men resort to pills, or anything that promises a "cure" for the habit. However, strong taboos or not, as many as 1364 or 95.8 per cent of the respondents claimed to have masturbated some time or the other. Only 4.0 per cent declined having ever masturbated and a minuscule 0.2 per cent did not give an answer.

Among those who claimed to have ever masturbated, the activity was observed to have started at a relatively young age, with over three-fifths (63 per cent) having begun to do so before the age of 16 years. The frequency of masturbation too was quite high with 31.2 per cent masturbating every day and 33.5 per cent masturbating two to three times a week. Thus, the percentage of respondents who masturbated at least once a week was 79.5.

First sexual intercourse

Over four-fifths (1158 or 81.3 per cent) of the respondents had experience of sexual intercourse, 17.4 per cent (248) had not experienced it, and a small percentage (1.3 or 18 respondents) did not reply. Considered age-wise, the majority of respondents in each age group had experienced sex or were indulging in it. Table 2 gives an age-wise distribution of respondents who claimed not to have had sexual intercourse.

TABLE 2

Age-wise distribution of respondents who have not had sexual intercourse

Age (years)	Total number of respondents	Respondents who had not had sexual intercourse
Below 20	83	36 (43.4)
20-24	321	99 (30.8)
25-29	434	82 (18.9)
30-34	252	15 (6.0)
35-44	242	14 (5.8)
45-55	92	2 (2.2)
All	1424	248 (100.0)

Figures in brackets denote percentages.

For 28.8 per cent of those who had had sexual intercourse, the first sexual experience had occurred with friends; for 22.9 per cent, with their spouse; and for 21.8 per cent, the partner was a paid person. Next in order were relatives (13.2 per cent) and casual acquaintances (10.4 per cent), and finally, work acquaintances (2.8 per cent). Ignoring spouses, since these refer to married respondents, friends and paid persons thus, formed a significant source of first sexual contact. Almost ten per cent (9.8 per cent) of the 1158 respondents, stated that they had their first intercourse with a person of the same sex.

The initiation of the first sex act was by the partner in 22.3 per cent of the cases while in 72.2 per cent of the cases, the respondents (men) themselves had done so. About 3.8 per cent of the men claimed to have been

TABLE 3

Distribution of married and unmarried respondents by age at first intercourse

Age at first intercourse (in years)	Unmarried No.	Unmarried %	Married No.	Married %	Not specified No.	Not specified %	Total No.	Total %
Before 20	251	51.3	218	33.2	7	58.3	476	41.1
20-24	168	34.4	204	31.1	4	33.3	376	32.5
25-29	40	8.2	196	29.8	1	8.3	237	20.5
30-34	3	0.6	20	3.0	—	—	23	2.0
35-44	—	—	3	0.4	—	—	3	0.3
45-54	2	0.4	—	—	—	—	2	0.1
Not specified	25	5.1	16	2.4	—	—	41	3.5
Total	489	100.0	657	100.0	12	100.0	158	100.0
Never experienced sex	218	30.4	22	2.8	8	40.0	248	17.4
Not specified sexual experence	11	1.5	7	0.9	—	—	18	1.3
(N)	718		786		20		1424	

forced into it, 19.5 said that they had complied reluctantly, whereas 69.9 per cent said they had sex of their own volition.

The first sexual experience occurred pretty early in our sample; as Table 3 indicates, 41 per cent had experienced a sexual encounter when they were under 20.

Surprisingly, of the 686 married respondents, 22 claimed that they never had a sexual experience. Of the remaining 657 respondents, 2 had not had sex with their spouse during the first year of marriage and 5 of them currently did not have sex with their married partners. About two-thirds (64.8 per cent) of the married respondents who had ever experienced sex, claimed to have had a sexual experience prior to marriage.

Pre-marital sex

The first sexual experience for the married respondents occurred before the age of 20 years for 33.2 per cent while 31.1 per cent had their first sexual experience between 20–24 years. By the age of 29 years almost all the married respondents had experienced sex. It is often presumed that premarital sex is a relatively recent behavioural phenomenon. However, this does not appear to be correct as a significant number of the older men have had premarital sex. Table 4 shows the age profile of the respondents who have had premarital sex.

TABLE 4

Age distribution of respondents who have had premarital sex

Age (in years) of respondents	Respondents No.	%
20-24	17	4.0
25-29	86	20.2
30-34	122	28.6
35-44	144	33.8
45-55	57	13.4
Total	426	100.0

Figures in brackets denote percentages.

The age profile of the married men who had experienced premarital sex was observed to be similar to that of all married men in the sample. This similarity of profile was also observed in the case of income. Hence, there there does not seem to be any characteristic socio-economic difference amongst the married respondents who had pre-marital sex and those who had not.

Marital Sex

The mean age of the married men in the sample was 32 years, while their mean age at marriage was 25.5 years and that of their partners was 22 years.

In 59.3 per cent of the cases, the marriage had been arranged by the family, 16.9 per cent of the respondents had a love marriage, 16.2 per cent had an arranged-cum-love marriage, and a small 3.2 per cent had entered into marriage through matrimonial columns or marriage bureaux. Of the 686 married men, surprisingly, 8.2 per cent claimed that they had not experienced sexual intercourse at all.

On the first night of marriage only 54.5 per cent reported to have had sex with their partners. During the first year of marriage, 80.9 per cent claimed to have had sex with their wives every day, and currently, 42.4 per cent reported to have sexual intercourse every day with their wives. A comparison of the two distributions is given in Table 5.

TABLE 5

Distribution of married respondents by frequency of sex during marriage

Frequency of sex	First year of marriage		Current	
	No.	%	No.	%
Almost every day	532	81.0	278	42.3
Once a week	84	12.8	247	37.6
Once a fortnight	15	2.3	58	8.8
Once a month	3	0.4	21	3.2
Once in 2/3 months	3	0.4	9	1.4
Less often	3	0.4	16	2.4
Never	2	0.3	5	0.7
Not disclosed	15	2.3	23	3.5
Sub-Total	657	100.0	657	100.0
Never experienced sex	22	3.2	22	3.2
Not specified sexual experience	7	1.0	7	1.0
Total	686	100.0	686	100.0

There is an obvious relationship between age and frequency of intercourse with younger couples being more sexually active.

Extramarital Sex

Of the 686 respondents who were married, 381 or 55.5 per cent claimed to have had sex with a person other than their spouse. The multiple responses to this question revealed that over half of them (53 per cent) had

had extramarital sex with their friends, 26.2 per cent with casual acquaintances, 25.5 per cent with relatives, 17.8 per cent with work acquaintances, and 12.6 per cent had had extramarital relations with other unspecified partners.

Almost two-fifths (39.1 per cent) of the 381 respondents had had less than five extramarital partners, over a fifth (22.8 per cent) had had between 5 and 10 partners, while 29 per cent had reported to have had more than 10 partners. About 9 per cent of the respondents did not specify the number of partners.

Homosexuality

The number of respondents who had had a homosexual experience is significant. Of the 1158 respondents who ever had sexual intercourse, 424 (36.6 per cent) reported a sexual relationship with a person of the same sex (Table 6). Over a tenth (12.1 per cent) of the unmarried respondents reported that their first ever sexual experience was with a partner of the same sex.

TABLE 6

Distribution of respondents who ever had a homosexual experience by age at first homosexual experience and number of persons with whom they had such contacts

	Unmarried		Married		Total	
	No.	%	No.	%	No.	%
Age at first homosexual contact						
Less than 9 years	12	6.0	9	4.2	22	5.3
10-14 years	64	31.4	79	35.8	144	33.9
15-19 years	92	45.1	92	41.8	183	43.1
20-24 years	28	13.5	27	12.2	54	12.7
25+ years	7	3.4	9	4.2	16	3.8
Not specified	1	0.5	4	1.8	5	1.2
Total*	204	100.0	220	100.0	424	100.0
No. of persons visited						
1-2 persons	88	43.1	84	38.2	170	40.2
2-5 persons	34	16.6	44	20.0	80	18.8
6-10 persons	23	11.3	31	14.1	54	12.8
10+ persons	48	23.6	49	22.2	97	22.8
Not specified	11	5.4	12	5.5	23	5.4
Total*	204	100.0	220	100.0	424	100.0

Figures in brackets denote percentages.

* Twenty respondents did not report their marital status.

This proportion was 8.4 per cent among the married respondents, indicating that the currently married, who are younger than their elder counterparts in the sample, are more uninhibited. Most of these men had their first sexual experience with a partner of the same sex before they were 20 years of age as is evident from Table 6.

For about two-fifths (40.2 per cent) of the respondents—both unmarried and married—the homosexual experience was limited to 1-2 persons, while over a fifth had had such relations with more than 10 persons as can be seen from Table 6.

Only 20.6 per cent of the respondents who reported to have had sex with a person of the same sex claimed to have used the condom. In the case of married respondents, almost a third (31.0 per cent) mentioned that their spouse was aware of their homosexual affairs.

Paid Sex

We have earlier seen that 252 or 21.8 per cent of the 1158 respondents who ever had a sexual experience, had had their first experience with a paid person. The percentage of all respondents who ever had sex with paid persons was 30.1 (428). Table 7 presents a distribution of such respondents by age at the first such experience and the number of persons with whom they had sexual relations. The number of paid persons with whom the respondents have had sex has a median of 7

TABLE 7

Distribution of respondents who indulged in paid sex by age at first such experience and number of persons visited

	Unmarried		Married		Not specified		Total	
	No.	%	No.	%	No.	%	No.	%
Age (years) at first paid sexual experience								
Below 15	7	3.4	5	2.3	—	—	12	2.0
16-20	11	5.4	6	2.7	—	—	17	4.0
21-24	85	41.7	72	32.6	3	100.0	160	37.4
25-29	76	37.3	72	32.6	—	—	148	34.6
30+	24	11.8	35	15.8	—	—	59	13.8
Not specified	1	0.4	31	14.0	—	—	32	7.5
Total	204	100.0	221	100.0	3	100.0	428	100.0
No. of persons visited								
1-5 persons	98	48.1	87	39.4	2	66.6	187	43.7
6-10 persons	38	18.8	36	8.4	1	33.3	75	17.6
11-20 persons	19	9.4	25	11.4	—	—	44	10.2
20+ persons	24	3.4	28	12.7	—	—	53	12.4
Total	204	100.0	221	100.0	3	100.0	428	100.0

The main reasons given by these respondents for having sex in exchange of money were to have sexual experience (50.0 per cent), "felt like it" (50.2 per cent), and "did so while on tour" (21.5 per cent). There was no significant difference in the responses received to this question from married and unmarried respondents. Further, about a quarter (26.8 per cent) of the married respondents claimed that their spouses knew about their having sex in exchange of money. As far as protection was concerned, only 19.4 per cent of these respondents reported the regular use of condoms.

Sexual Habits

More than three-fifths (65.7 per cent) of the respondents who ever had sex reported frequent orgasm. Pornographic books were read by 41.6 per cent of the respondents while 25 per cent watched blue films, and 64.3 per cent initiated love-making. Sexual activity was reported to be currently satisfactory by 55.6 per cent of the respondents and 34.9 per cent wished they had a better sex life.

Within marriage, 86.6 per cent indulged in caressing and touching, 82.5 per cent in kissing, 59.0 per cent had oral sex and 16.3 per cent had anal intercourse with their wives. Outside their marriages too, the married respondents showed almost the same sexual habits, the respective percentages being 90.8 per cent, 87.1 per cent, 57.7 per cent, and 19.4 per cent.

The unmarried respondents too reported sexual habits similar to the married men with 93.3 per cent caressing and touching, 86.5 per cent kissing, and 45.6 per cent and 18.9 per cent indulging in oral and anal sex with their partners.

It is important to note that 15-20 per cent of the respondents reported having anal intercourse with a person of the opposite sex, including their wives. This activity then, which is often presumed to exist only between homosexuals, does occur amongst heterosexuals too.

Within marriage, the response of the wives to their husbands was: 81.8 per cent caressed and touched, 78.3 per cent kissed, 51.7 per cent had oral sex, and 7.2 per cent report anal insertion. The responses of the partners in the case of unmarried men was: 79.2 per cent caress and touch, 81.9 per cent kiss, and 43.7 per cent have oral sex.

While over half (56.3 per cent) of the married respondents did not have sex when their partners were menstruating, only 13.2 per cent of the unmarried respondents abstained from sex with a menstruating partner. Also, 36.4 per cent of the married respondents and more than twice (77.7 per cent) their unmarried counterparts did not have any special time when they abstained from sex.

Aids used to increase sexual drive were few—89.6 per cent of the unmarried men did not use any aids. Alcohol was the only significant aid used for sexual stimulation mentioned by 6.9 per cent of the respondents. A few respondents also mentioned meditation, diet and exercise.

Birth Control Methods

Except for 14.1 per cent of the married respondents, the balance use some birth control method or the other. In the case of unmarried men the percentage of respondents who do not use any birth control method is very high at 60.2 per cent. The methods used are presented in Table 8.

TABLE 8

Per cent distribution of respondents by birth control methods used

Method	Unmarried %	Married %	%
Periodic abstinence	8.8	33.2	20.6
Withdrawal	14.1	40.5	26.8
Rhythm	6.5	23.0	14.5
Condoms	33.8	67.1	49.6
Oral Pill	9.2	25.8	17.1
Foam/Jelly	10.3	23.3	16.5
Diaphragm	2.9	8.3	5.5
Abortion	5.2	16.2	10.4
Male sterilisation	2.1	6.6	4.2
Female sterilisation	2.4	10.1	6.0
Others	2.6	6.4	4.4
None	??	??	??
Total	718	686	1424

The percentages do not add up to 100 due to multiple responses received.

It is interesting to note that the more popular methods are the least intrusive—abstinence, rhythm, withdrawal and condoms.

Sexual Problems

About 5.6 per cent of the unmarried respondents and 9.0 per cent of the married respondents reported to have had a sexually transmitted disease (STD).

As seen in Table 9, the incidence of STDs among the unmarried respondents was far lower than that among married respondents. However, the frequency of contracting STDs was extremely high among the former. Over four-fifths of the unmarried respondents (82.5 per cent) and 90.3 per cent of their married counterparts either consulted a doctor or went to a STD

TABLE 9

Distribution of respondents who reported history of STDs by number of times they had contracted STDs

	Unmarried		Married		Total	
	No.	%	No.	%	No.	%
1-2 times	13	32.5	29	46.8	42	41.4
3-5 times	4	10.0	6	9.6	10	9.6
More than 5 times	16	40.0	18	29.1	34	33.6
Not specified	7	17.5	9	14.5	16	15.4
Total	40	100.0	62	100.0	104	100.0

clinic for treatment.

Sexual problems were reported by 31.3 per cent (225) of the unmarried respondents and fewer (180 or 26.2 per cent) of the married respondents. The most frequently reported sexual problem was premature ejaculation (46.6 per cent). The other sexual problems which were more or less equally mentioned by unmarried and married respondents respectively in order of importance were: tiredness (16.8 per cent); pain (9.9 per cent); lack of libido (9.6 per cent); disinterest (6.2 pe cent); and impotence (5 per cent). About 11.4 per cent did not specify the nature of their problem. About 37.2 per cent of the respondents did nothing to relieve themselves of their problems, while 16.1 per cent reported visiting a doctor, 23.1 per cent discussed them with friends, and 27.5 per cent consulted books.

CONCLUSION

The results of this survey indicate that urban Indian men are not so different from their counterparts elsewhere. A good proportion start their sex life prior to marriage, and there is a significant incidence of premarital sex, extramarital affairs, paid sex and homosexuality in the population studied.

The implications for those involved in family planning and STD prevention work is that there is a necessity for directing communication to the young and the unmarried, since it is among these groups that the first sexual experience occurs. Further, since homosexual behaviour was observed among both married and unmarried respondents, there is a need to emphasise safe sex.

Sex education in this educated sample occurred largely through the medium of books. There is thus a need to develop good literature in this area; in fact, many respondents wrote to say that the books they had read were written from a "Western perspective", and hence had limited relevance to their lives.

Many of the younger respondents felt confused and guilty about certain aspects of their sexual behaviour (including masturbation, voyeurism, contacts with relatives, incest, homosexuality and oral sex). Sex education books that are written need to deal with these subjects too in a sensitive manner.

EFFECTS OF SOCIAL CHANGE ON THE HEALTH OF THE ELDERLY: EVIDENCE FROM A MICRO STUDY

DR. M. KABIR*

INTRODUCTION

Broadly speaking, the aging of a population refers to an increase in the proportion of the aged and a decrease in the proportion of the young[1]. It is a natural process but, in recent years, has emerged as a major issue not only in the developed countries but also in developing countries. Although the proportion of the aged in Bangladesh is still small, their growth is not, as improvements in health technology have resulted in more people living longer.

Current demographic projections show the population of Bangladesh to increase from 87.1 million in 1981 to about 140 million by the end of this century—an increase of 60 per cent. In contrast, the number of persons aged 55 years and above is expected to rise by about 76 per cent. Although the proportion of Bangladesh's elderly population is small compared to that in many developed countries, it is very substantial in absolute numbers because of the large size of the country's population. At the present rate of aging which is expected to continue between 1995 and 2000, there will be an addition of about 1.6 million persons aged 55 years and over, representing an increase of 32,000 elderly persons per year (Table 1).

There has not been much change in the proportion of population aged 65 and over largely as a result of the relatively high level and very slow decline of fertility in the recent past. The aging index—the proportion of those aged 65+ to those below 15 was estimated as 8.1 per cent in 1995. However, with the anticipated decline in fertility in the coming years, this index is expected to increase to 8.9 by 2000 A.D. resulting in a shift in the dependency burden between the two groups with young age dependency declining more sharply than old age dependency. Further, since women tend to outlive men, the number of widows at older ages significantly affects the social structure, marital status, living arrangement, income and pattern of social interaction among the elderly.

The consequences of aging are manifold. They range from social security issues and questions of health care for the elderly to labour supply and even cultural values and attitudes towards innovation. The serious impact of a rapidly aging population on national socio-economic development, on the population dependency ratio, the labour force, the provision of health

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TABLE 1

Aging indicators for selected years, Bangladesh

Indicators	Year				
	1980	1985	1990	1995	2000
Median age	16.8	17.4	18.5	19.6	20.5
Proportion aged					
0-14 years	46.5	44.4	41.5	40.0	38.5
15-65 years	50.1	52.0	55.1	56.7	58.0
65+ years	3.4	3.6	3.5	3.5	3.7
Aging index	7.4	8.1	8.2	8.4	8.9
Aged dependency a	13.6	10.6	9.8	9.6	9.8
Young dependency a	113.3	85.8	76.2	68.9	62.8
Total dependency a	126.9	96.4	86.0	78.5	72.6
Aged dependency b	6.8	6.9	6.2	5.9	6.0
Young dependency b	92.6	85.3	75.3	70.5	66.4
Total dependency b	99.4	92.2	81.5	76.4	72.4
Proportion aged					
65+ over 55+	79.3	91.3	84.6	80.9	79.3

Source: Bangladesh Population Census, 1981, Analytical Findings and National Series, Bangladesh Bureau of Statistics.

a = Dependency ratio has been defined as the ratio of population of age 0-14 and 60 and above to population of working ages 15-59 years expressed as a percentage.

b = Dependency ratio has been defined as the ratio of population of age 0-14 and 65 and above to population of working ages 15-64 years expressed as a percentage.

and other social services, people's values and behaviour and other aspects will soon be urgently faced in many developing countries.

OBJECTIVES

The purpose of this paper is to examine the effects of social change on the health of elderly people in Bangladesh. The major aim is to identify the health problems faced by them.

SAMPLE AND METHODOLOGY

The present paper deals with both secondary and primary data. The secondary data were mostly taken from the censuses. In addition, a micro level survey of about 700 persons aged 50 years and above was conducted to determine the social, economic and health consequences of the growing elderly population. The respondents were interviewed through a structured questionnaire.

RESULTS AND DISCUSSION

This section examines information obtained from the household survey on the socio-demographic characteristics, old age problems, family structure, health problems and community attitudes and support, of the respondents who constituted the study sample.

Socio-demographic Profile

Table 2 presents the socio-economic and demographic characteristics of the respondents. Agewise, about three-fourths were between 50-64 years and the remaining were 65 years and above. The household is a single unit for many social and economic activities, including income, maintenance, social and economic dependency, saving, social welfare and social adjustment and so on, can be most readily depicted when demographic trends are analysed in terms of changing dependency rates. Available evidence suggests that the role of the elderly within the joint family and community remains strong in the societal systems characterising the traditional agrarian societies of most developing countries[1].

TABLE 2

Some selected socio-economic and demographic characteristics of the respondents (N=678)

	Percent
Age	
< 65 years	73.6
65+ years	25.4
Mean	59.4
Family type	
Nuclear	64.3
Joint	30.5
Extended	5.3
Education	
No schooling	5.0
Primary completed	13.9
Secondary incomplete	17.8
Secondary completed	17.6
Higher secondary	14.5
Graduate and above	31.3
Mean (in years)	9.7
Occupation	
Household work	11.6
Self cultivation	10.2
Service	41.7
Business	31.6
Other	4.9

TABLE 2 *(Contd.)*

	Percent
Marital status	
Married	82.9
Unmarried	1.2
Widowed	13.1
Divorced/Separated	2.8
Average family members	7.1
Religion	
Islam	91.7
Hindu	8.3
Amount land owned	
< 100	63.9
100-299	22.0
300-495	8.0
500+	6.1
Median land	112.0
Whether children still depend on them	
Yes	76.1
No	22.4
No reply	1.5

Our survey data suggests a different picture since as many as 75 per cent of the elderly respondents belonged to nuclear families and only a third came from joint families. Cultural traditions in Bangladesh usually provide adequate and sympathetic support to the elderly population, but those who live in nuclear families are very vulnerable because their married children are separated from them. This implies that they would get very little care and support in case of need. Although the problems have not been serious so far, there are indications that with rapid urbanisation and modernisation, traditional value systems will change rapidly.

The information collected suggests that many family members of the elderly respondents have been moving to other areas in search of employment because of economic hardship and poverty. If this continues, it will pose problems for the care of the elderly in the future[3]. Since the sample was urban and semiurban, a large percentage of the respondents were educated (Table 1). About 83 per cent of the elderly people were in marital union at the time of survey. The incidence of widowhood was fairly high. A large majority of the respondents were also landless, perhaps due to the fact that the sample was drawn from urban areas. Since over two-thirds of the elderly population lived in nuclear families, most of their young children were dependent on them.

Health Problems of the Elderly

Aging is often accompanied by deterioration of both physical and mental health. In most developing countries, health services are concentrated in the big cities. Thus, hospitals which have comprehensive health and medical services for the aged are mostly located in big cities, and only smaller hospitals with limited facilities, covering a relatively large proportion of population, are situated in rural areas.

Among the most basic needs of the elderly for which there is an increasing demand are health care services, social support and housing. Ideally, health services to the elderly should not be justified solely on ethical and human considerations towards handicapped and dependent citizens. They should be viewed in the light of providing adequate health care which can assist them to remain economically and socially productive or at least physically sound and hence reduce the burden on society.

At the time of survey, more than half (57.2 per cent) of the respondents were suffering from various diseases, while about two-fifths (41.3 per cent) had no complaints, and a small proportion (1.5 per cent) did not respond to the question. The most common ailments were heart disease/blood pressure/paralysis (23.0 per cent); fever, coughs and colds (11.5 per cent), and gastric ulcers (10.1 per cent). Except for a fifth of the respondents who went to a governmnent hospital for treatment, over three-fifths (65 per cent) visited a private doctor or a private clinic for their health problems. A small minority sought treatment from homeopathic practitioners.

Over half (56.2 per cent) of the respondents did not avail of government facilities because of the lack of proper and/or sympathetic attention and care from the doctors, and about a sixth mentioned the distant location of government hospitals or the long waiting time as deterrents (Table 3).

In Bangladesh, the government policy does not take into consideration the health implications of the rapid growth in numbers of the elderly population. The primary health care system has no special provision for providing health care for the elderly and the overall health policy shows no special concern for them.

The respondents then, were asked to specify the kind of services they would prefer for the elderly. Almost two-fifths (39.2 per cent) suggested the provision of health care services at home, followed by 36.3 per cent who suggested the provision of regular nursing facilities, and arrangements to be made for domiciliary nursing (19.6 per cent) and for taking them to the hospital for regular check-ups (3.6 per cent).

The respondents also said that within the primary health care system, community health workers should be trained to take care of the elderly, that

TABLE 3

Percent distribution of respondents by type of health ailment and treatment sought

	Percent
Type of ailment	
Heart disease/blood pressure/paralysis	23.0
Rheumatism	19.1
Fever/cough/influenza/ cold	11.5
Gastric ulcer	10.1
Diabetes	9.2
Asthma/tubuculosis	5.1
Cannot see properly	4.1
Mental anxiety	0.4
Headache	3.1
Other	14.4
Treatment taken from	
Private doctor	54.2
Government hospital	19.0
Private clinic	11.1
Homeopathic	9.6
Paramedic	4.4
Other	1.7
Reasons for not visiting a Government clinic	
Hospital far away	15.0
Do not supply proper medicine	27.3
Doctors do not attend seriously	23.9
Do not receive proper attention	5.0
Have to wait for a long time	14.1
Thought disease was not serious	13.8
Don't know	0.8

is, health services for the elderly should be integrated into the health system, with intensive health education programmes emphasising the family's responsibility to care for the elderly. Increased facilities for geriatric medical services in hospitals and clinics, as also vocational or occupational training could enable the aged to be economically productive. It is also important to educate the community, the family, social workers and the young on how to take care of elderly persons.

Basic Problems of the Elderly

Aging is not just an individual problem, but a problem of the family as well as of the community. Traditionally, a Bangladeshi lives within the joint family system. However, the deteriorating economic situation and widespread rural poverty have resulted in a gradual shift from the joint family to the nuclear family system. While emotional ties and natural support among family members remain strong in most areas of the world, it is evident from Bangladesh data that socio-economic and demographic changes are increasingly affecting the capacity of the family to maintain its care-giving role. As fertility rates begin to drop in rural areas, the problem of over-concentration of elderly persons lacking socio-economic support from younger family members is expected to become more acute.

Rural poverty coupled with unemployment has forced a large number of young families to migrate to urban areas in search of employment. As a result, many elderly people are left behind. This suggests that the burden of continuing care for the elderly is being left to those remaining in the villages, not necessarily their siblings. In rural areas, trends towards out-migration of younger persons implies loss of a traditional source of social support for the elderly. Belonging to one of the poor segments of the population, they generally lack resources for improving their housing situation. In urban areas too, the ability of families to continue traditions of care for the elderly is declining. Constraints include the small size of living quarters, limited financial resources of wage earners, and the increasing tendency of women to join the labour force.

As the aging process advances, the elderly obviously experience diminishing capabilities either due to deterioration, malfunction or accidents. Coping with such disabilities could be a problem especially when medical and health services are inadequate, as in rural areas. Moreover, economic support, marital and physical problems are also frequent. Nutritional problems become more severe when other illnesses and debility exist. The state of their mental health is another matter of considerable concern—their loneliness is aggravated by their perceived alienation.

Main problems expressed by the respondents

When asked to express their major problems, roughly half (47.3 per cent) of our elderly respondents mentioned financial problems, followed by physical (18.2 per cent), mental (13.8 per cent), social (4.8 per cent) and other unspecified (12.9 per cent) problems. It was also observed that in about three-fifths of the cases, the neighbours were aware of the problems faced by the respondents.

Financial support

Traditionally, the family is by far the primary source of material and social support of the elderly, and in many instances, it constitutes the only source of support. The traditional belief that sons are a source of old age security is still embedded in our culture. Although this has been found to be so, there is some evidence that an increase in individualism and materialism can conflict with traditional values.

About one-third (30.5 per cent) of the respondents were receiving financial support from their sons and a large majority of them reported that the amount is insufficient for their livelihood. The traditional belief that sons will look after their parents in old age has been changing. In response to a question as to whether old people think that daughters take more care of them than their sons, 27 per cent seemed to agree. The comparable figure for sons was about 25 per cent, and for both sons and daughters together was 34.4 per cent.

About 453 respondents gave their opinions about the type of assistance they would like to receive. While 22.9 per cent opted for an old age allowance, 13.3 per cent sought government housing facilities, 10.9 per cent wanted health care services, a surprising 27.8 per cent desired recreational facilities, and the remaining 25.1 per cent could not specify the type of assistance needed. When those respondents who did not have anyone to help them, were asked the same question, 42 per cent reported that they needed a nursing home, financial support from the government (24.1 per cent), facilities for medical treatment (9.3 per cent), and social and community support (19.0 per cent).

Loneliness

Loneliness is a major problem which creates tension and anxiety to the minds of the elderly. In our sample, only 15 per cent of the respondents expressed feelings of loneliness. The reasons offered were that their son or daughter did not stay with them (29.6 per cent), or that the husband/wife had died (31.6 per cent). About 60 per cent stated that they would feel comfortable if their married children would live with them.

About 41 per cent of the 276 respondents who were separated from their children reported to have contacts with them, while 2.4 per cent were not at all in touch, and in about 57 per cent of the cases, separation from children was not applicable. About 46 per cent of these respondents also stated that they were most frequently visisted by their sons, 31 per cent generally received their daughters, and the remaining 26 per cent, were visited by others.

When asked why their married children had left them, 182 respondents gave various reasons such as to take up a job (mentioned by 50 per cent), "due to business" (9.9 per cent), "due to wife" (7.1 per cent), shortage of living space (14.8 per cent) and other unspecified reasons (18.1 per cent).

Relationship between incidence of disease and socio-economic characteristics

Attempt was made to see whether there is a relationship between the incidence of disease and the socio-economic characteristics of the respondents. The information in this respect is shown in Table 4.

TABLE 4

Percentage distribution of respondents by incidence of disease and selected socio-economic characteristics

	Percentage respondents who suffered from diseases
Education	
No education	70.6
Primary completed	64.9
Secondary incomplete	47.1
Secondary completed	59.7
Higher secondary	67.1
Graduate and above	56.7
Occupation	
Household	67.1
Self cultivation	60.9
Service	53.7
Business	53.7
Other	78.8
Religion	
Muslim	57.7
Hindu	31.8
Land owned (in decimal)	
100	58.2
100-299	57.0
300-499	50.0
500+	57.1

Although the sample size is not large enough to reach a definite conclusion, there is evidence that the incidence of disease is related to socio-economic background characteristics. The higher the education and better the occupation of the respondent, the lower is the incidence of disease. This may be attributed to the fact that persons with a higher education have better occupations and are more aware of their health needs and healthcare practices. Religion also seemed to influence the incidence of disease in that Muslims had a higher incidence of disease than Hindus.

Table 5 tries to find the relationship between the socio-economic characteristics and what should be done for the elderly.

TABLE 5

Percentage distribution of respondents by type of assistance desired and level of education and occupation

Type of assistance desired	A. Level of education of the respondents					
	No education (N=34)	Primary completed (N=94)	Secondary incomplete (N=121)	Secondary completed (N=119)	Higher secondary (N=98)	Higher degree (N=212)
Nursing arrangement at home	20.6	11.7	18.2	21.0	20.4	22.6
Take them to the hospital	2.9	10.6	0.8	5.0	2.0	1.9
Facilities for regular nursing	32.4	50.0	38.0	40.3	33.7	18.3
Facilities for health care services	44.1	27.7	42.1	31.1	42.9	45.3
Other	–	–	0.8	2.5	1.0	1.9

	B. Occupation of the respondents				
	Household (N=79)	Self-cultn. (N=69)	Services (N=283)	Business (N=214)	Other (N=33)
Nursing arrangement at home	19.0	14.5	20.1	21.5	15.2
Take them to the hospital	6.3	4.3	1.4	4.7	6.1
Facilities for regular nursing	30.4	42.0	34.6	37.4	42.4
Facilities for health care services	44.3	33.3	42.4	36.0	36.4
Other	–	5.8	1.4	0.5	–

Since the responses given in this regard are multiple in nature, it is difficult to establish an association. However, there is an indication that better educated respondents with high occupations tend to express their views on the needs of the elderly.

CONCLUSION AND POLICY IMPLICATIONS

Although the proportion of the elderly population is not much compared to the young and working population in Bangladesh, the absolute size is not small. Because of deteriorating social and economic conditions coupled with poverty the traditional joint family structure has been changing to a nuclear one. Further, rural poverty is forcing a large number of young families to migrate to big cities for employment, leaving their parents behind.

With time, this aged population would experience diminishing capabilities. Since there are no special treatment facilities for them, they will face various health problems, including those of mental health, compounded by nutritional problems. Again, loneliness among the elderly is aggravated by their perceived alienation. The age difference between a Bangladeshi husband and wife at the time of first marriage is about ten years. This indicates that there will be a large proportion of widows than widowers among the aging population, thereby increasing the incidence of loneliness among elderly females.

Bangladesh has no social security system. The existing income security coverage largely benefits wage earners or certain categories of wage earners such as civil servants. Self-employed persons in urban areas and the rural agrarian population, which includes the great majority of the elderly population—remain outside the social security system. This large segment of the elderly population therefore, feels the impact of old age, and with diminishing health and strength, their income and consequently their only means of livelihood is seriously affected. Consequently, they have to depend on their children or relatives and friends. Because of deteriorating economic conditions, this support too will not be available in the future. It is, therefore, very important to identify the special needs of the rural elderly and to develop innovative income security measures to meet their needs.

Again, there are no separate health and medical facilities for the elderly population. In addition to financial benefits therefore, health care facilities including nursing homes as also recreational facilities, and social and community support are required to cope with their problems. Appropriate measures to secure the welfare and safety of older people paying particular attention to the situation and needs of older women are called for.

The most crucial factors influencing the condition of elderly in a country like Bangladesh are culture, tradition and values. The key issue is whether these norms are strong enough to guarantee that families will continue to play their traditional roles and maintain their traditional ties with their elderly despite the increase in the dependency burden, the decline in the family's economy, migration and increasing participation of women in economic activity outside the home. Because of the strong extended family relationship, most elderly persons are at present, being cared for by the extended family system. The future prospects for the elderly will depend on development, and one would expect continued modernisation to lead to a future decline in the status of the elderly in Bangladesh.

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ISSUES AND PROBLEMS IN INTRODUCING FAMILY LIFE EDUCATION FOR BOYS AND GIRLS OF SECONDARY SCHOOLS

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INTRODUCTION

The Family Planning Association of India (FPAI) has done pioneering work in the field of population, sex and family life education. The Association convened the first residential workshop on sex, sexuality and marriage counselling in 1976-77 in Pune, and two years later, established a separate unit—Sex Education Counselling Research Training and Therapy (SECRT) Centres to advance this new dimension of its educational programme. Today, FPAI has eight full-fledged SECRT Centres in Bombay and seven other major cities, which provide counselling in sexual and marital problems, offer training programmes in human sexuality counselling to doctors, teachers, and workers of youth-serving agencies, conduct research studies, as well as seminars and other activities aimed at spearheading a youth-to-youth movement for promoting reproductive health among young people.

The FPAI Pune Branch was established in 1976-77, and its SECRT Centre was set up in 1983. The Branch also runs a special cell—Youth Counselling Centre—which is recognised by the University of Poona. The Branch has a multidisciplinary team of doctors, social scientists, educationists and trained social workers. The members of the team have received special training in Adolescent Reproductive and Sexual Health, and since 1977, have been conducting seminars and workshops on this subject for late adolescents and young adults (16-25 years) in both urban and rural areas.

Until 1982, the Branch's family life education programme was not able to reach young adolescents in the age group 11-16 years as the principals of secondary schools were antagonistic to this educational activity. By 1982 however, its persistent efforts resulted in a positive response from the principals of two secondary schools in which the Branch began to conduct family life and sex education programmes. The activity however, as directed by the school authorities, was limited to girls of Standard VIII and the content was restricted to the physiology of menstruation and hygiene.

The Branch began by inviting the teachers and parents of the students to attend the programme so that they could understand for themselves the concepts of and need for such educational programmes. This helped, and by 1985, the full course had been accepted for girls and by 1988, for boys of Standards VIII, IX and X as well. Two pilot studies to determine the age at menarche among girls, and the age at which boys first experience a nocturnal emission, were then undertaken to enable the Branch to decide the Standard or grade in which family life education courses could be introduced for boys and girls.

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OBJECTIVES

Between 1982 and 1990, as the subject began to gain acceptability, the demand for the Branch's programmes also increased. In 1989-90, when it had begun to reach out to a fair number of secondary schools, the Branch decided to undertake a study of the opinions of principals, teachers, students and parents (involved in the project) to various issues concerning its family life education programme including problems in introducing such courses in secondary schools. The intention was to

1. assess the need for family life education among students of secondary schools as perceived by the students themselves, as well as their principals, teachers and parents, and the need for including the subject in the regular curriculum of secondary schools.
2. study whether family life education can be introduced in co-educational schools.
3. decide the ideal Standard or grade in secondary schools to begin a course on family life education.
4. determine the need for a permanent counselling centre to guide youth in matters concerning sexual health.
5. find out the requirements for an ideal and effective sex and family life educator.
6. explore the sources of information available to adolescents in relation to sex and sexual behaviour.
7. explore the possibility of utilising trained youth leaders to work as facilitators.

SAMPLE AND METHODOLOGY

Ten co-educational secondary schools were selected from amongst 78 schools in Pune, where the Branch runs a family life education programme. The schools were those from which the Branch had been receiving the maximum co-operation in its work. The sample was drawn from these ten schools as follows

1. 1,000 girls and 500 boys from Standard IX were selected at random (10 per cent sample of the 1988-89 batch). All the students had attended at

least two of the three courses in family life education conducted by the Branch.

2. 500 teachers were selected on a voluntary basis; no definite criteria were used to include either male or female teachers in the sample.
3. Ten principals from the ten selected schools and 40 principals from 40 other co-educational secondary schools where the Branch's family life education programme was on-going, were enrolled in order to get an adequate sample size.
4. The parents of the selected students also formed a part of the total sample. As it was not possible to differentiate between male and female respondents, 500 parents of girls and 500 parents of boys were chosen.

Separate questionnaires were prepared for the four different groups—principals, teachers, students and parents, in order to fulfil the objectives of the survey. They were pretested and modified suitably. All the principals, teachers, and parents were conversant with the concept and course content of the family life education programme (for students of Standards VIII, IX and X), and were capable of making logical and responsible decisions. Nevertheless, an information leaflet on the concept and course content was given to them for use as an aide-memoire, before filling up the questionnaire.

At a meeting, 20 trained volunteer teachers associated with the Branch's family life education programme were explained the objectives and the questionnaire. The teachers, in turn, explained the objectives and resolved the doubts of the students at a session prior to administering the questionnaire. The students were responsible for getting either one of their parents to fill up the questionnaire and return it to the class teacher (either parent was allowed to fill it up as a previous survey in which both parents were requested to jointly discuss and complete the questionnaire did not yield dependable responses).

The response rate of the students was found to be higher as they were very enthusiastic and also because the exercise was conducted as a classroom event. About 94 per cent of the boys and 98 per cent of the girls participated in the survey. The response rates among the sample of principals, teachers and parents were 70 per cent, 75 per cent and 62 per cent respectively, which were relatively low compared to that of the students.

RESULTS AND DISCUSSION

Need for family life education in secondary schools

There is still a great controversy amongst the masses about the need for sex education in schools, though of late, both educationists and government agencies have been in favour of introducing sex education in secondary schools. In our sample, 96.3 per cent of the principals, 97.0 per cent of the teachers, 89.3 per cent of the parents, 99.9 per cent of the boys and 81.8 per cent of the girls felt that there is a definite need for family life education at the secondary school level, indicating that the majority of respondents were in favour of such education for students. Group discussions with the students revealed that older girl students from the lower socioeconomic class neither showed much interest in the "how" and "why" of menstruation and other aspects of the development process, nor did they realise the significance of such an education. This observation explains why 14.7 per cent of the girls did not feel the need for these courses as compared to the other respondents—a marginal 0.1 per cent of the boys, 5.1 per cent of the parents, 1.3 per cent of the teachers, and 3.7 per cent of the principals.

Incorporation of family life education in the regular secondary school curriculum: Views of principals and teachers

About three-fourths (74.1 per cent) of the principals and 89.6 per cent of the teachers were in favour of incorporating family life education in the routine curriculum of secondary schools. However, though all the principals and teachers were drawn from secondary schools where the Branch has an ongoing family life education programme, 23.2 per cent and 9.9 per cent respectively were against it; the remaining few declined to answer the question. It was of interest therefore to find out the reasons for their objection to such courses for their students.

The main reasons given by them were that (1) incorporating family life education in the curriculum would raise unnecessary curiosity and lead to misconduct among the students—present-day boys and girls are difficult to control; (2) the students are already overburdened with studies and the pressure of examinations—such education (in family life) is not meant for the school curriculum and should be imparted at home; and (3) schools do not have any extra time to allocate for this new subject; the teaching of such subjects should be left to specialists.

Introduction of family life education in co-educational secondary schools: Views of principals

The number of co-educational schools varies in different states. During the last two decades, co-educational schools seem to have increased in number in some states, especially in rural areas, while in others they seem to be on the decline.

On the Indian scene, sex is still considered taboo and therefore, is not a subject for open discussion. Scientific sex language is still in the process of standardisation and people feel embarrassed to use it openly, especially in heterosexual groups. In view of this socio-cultural background, it was felt necessary to elicit the views of the principals regarding the introduction of family life education in co-educational secondary schools.

An overwhelming majority (88.9 per cent) of the principals favoured the idea provided its biological aspects were taught to boys and girls in separate groups; the remaining (11.1 per cent) were against its introduction in any case. It may be noted that all the principals included in the sample were drawn from co-educational schools where the Branch was operating a family life education programme at the time of the survey. No gender difference was noticed in the opinions given by the 10 female and 40 male respondents who comprised the total sample of 50 principals.

Why the biological aspects of family life education should be taught to boys and girls in separate groups

Explaining the biological aspects of the family life education course to boys and girls together, makes it embarrassing for the girls—they feel shy and hence no discussion is possible on the subject.

In our thirteen years' experience, a bare 5-10 per cent of the girls in the formal sector were observed to attend a family life education course when it was offered on a voluntary basis and attendance was not compulsory. However, when it was conducted exclusively for girls, the response was remarkably good.

In the Indian context, girls are not comfortable in the presence of boys. They feel shy, embarrassed and uncomfortable, and are hence non-communicative and do not actively participate in open discussions. Since girls and boys have different problems, taking a joint class on the subject then is likely to produce an unhealthy effect. In fact, the girls have been observed to feel so embarrassed that they do not even look at the visuals in the presence of boys. Further, some elements in the boys' group have a tendency to make gestures and sounds, or to make open remarks which make the girls feel uncomfortable and sometimes even disgusted. Repeated attempts are made by such boys to ask for an explanation about masturbation, the size of the penis or intercourse (verbal exhibition), as they continue to stare at the girls and watch their expressions thereby creating a very embarrassing situation. The girls thus feel very uncomfortable in such a group and become restless. Therefore, if at all family life education programmes are to be made more acceptable, one has to understand and respect the socio-cultural background of the communities with which one is working.

Age and grade for introducing family life education

Boys

Three criteria were applied to determine the age and grade or Standard in which family life education courses could be introduced in secondary schools. These were

(1) age at first experience of nocturnal emission,
(2) Standard or grade in which the boy had the above experience, and
(3) whether the course should be started before or after the boy has had his first experience of nocturnal emission.

Table 1 gives a distribution of the boys by age and the Standard they were studying in when they first experienced a nocturnal emission.

TABLE 1

Percent distribution of boys by age at first nocturnal emission, and respondents' opinion of age for starting family life education for boys

Age (years)	10-11	12-13	14-15	16-17	18-19	20	N.R.	Total
Age at first nocturnal emission	2.3	16.8	32.3	10.5	0.2	—	37.9	100.0
**Optimum age for starting FLE*								
Principals	29.4	11.1	55.6	—	—	—	3.9	100.0
Teachers	8.2	30.0	40.0	16.8	—	—	5.0	100.0
Boys	0.2	14.9	37.2	—	—	—	47.7	100.0

N.R. = No response.

TABLE 2

Percent distribution of boys by Standard (grade) studied at the time of first nocturnal emission, and respondents' opinion of grade for starting family life education for boys

*Standard	VI	VII	VIII	IX	X	XI	N.R.	Total
**Standard studying at first nocturnal emission*	1.0	10.6	29.1	28.9	—	—	30.4	100.0
**Ideal Standard for starting FLE*								
Principals		3.7	22.2	51.9	7.4	—	14.8	100.0
Teachers		11.4	32.9	30.7	11.4	—	13.6	100.0
Boys		5.6	25.8	28.4	13.6	—	26.6	100.0

N.R. = No response.

About a third of the boys reported to have experienced a nocturnal emission for the first time at the age of 14-15 (Table 1); the mean age being

14.06 years. Grade-wise, about two-fifths (40.7 per cent) had their first experience by the time they were in Standard VIII and 69 per cent had experienced it by the time they were in Standard IX (Table 2).

The majority of the respondents—principals, teachers and the boys themselves (89 per cent of the principals and teachers and 99 per cent of the boys) were in favour of starting the family life education course before the boys experienced a nocturnal emission. While 4 per cent, 7 per cent and 1 per cent of the principals, teachers and boys respectively thought it advisable to start such education after the event, 7 and 4 per cent of the principals and teachers did not answer the question. In the formal sector, the grade or Standard may be used for fixing the stage at which family life education can be imparted to boys, while in the case of the non-formal sector, or for out-of-school boys, age can be a practical guide for initiating such educational programmes.

Table 1 also reveals that all the respondents agreed that 14-15 years is the best age to start family life education for boys. While the second choice among the teachers and boys was the earlier age group i.e. 12 to 13 years, it is difficult to understand the principals' second choice of the still earlier age of 10 to 11 years. In case of grade, as indicated in Table 2, the principals preferred Standard IX as the ideal grade for starting family life education while the teachers showed an equal preference for Standards VIII and IX. When such a difference of opinion arises, it is helpful to use the other criterion, that is whether such education should be given before or after experiencing a nocturnal emission, for determining the ideal grade.

Girls

As in the case of boys, three criteria were applied to determine the age and grade at which family life education programmes could be started for girls. These were:

(1) age at menarche,
(2) grade in which she is studying when she attains menarche, and
(3) whether family life education should be given before or after menarche.

Table 3 gives a distribution of the girls by age and the Standard they were studying in when they attained menarche.

As is evident from Table 3, about 44 per cent of the girls had attained menarche at the age of 13 years. And, an almost equal proportion had attained it at age 12 (21.9 per cent) and 14 (23.1 per cent). The mean age at menarche was 13.06 years. Grade-wise too, about 45 per cent of the girls were studying in Standard VIII at the time of attaining menarche (Table 4).

The majority of the respondents were of the opinion that family life education should be given before the onset of menarche—96.3 per cent of the principals, 95.9 per cent of the teachers, and 98.4 per cent of the girls

TABLE 3

Percent distribution of girls by age at menarche, and respondents' opinion of age for starting family life education for girls

Age (in years)		11	12	13	14	N.R.	Total
Age at menarche		1.8	21.9	44.4	23.1	8.8	100.0
Age (in years)	**10-11**	**12-13**	**14-15**	**18-19**	**20**	**N.R.**	**Total**
Optimum age for starting FLE							
Principals	14.8	66.7	18.3	—	—	0.2	100.0
Teachers	14.6	62.0	17.9	4.3	—	0.2	100.0
Parents	20.8	72.4	—	—	—	6.8	100.0
Girls	13.2	61.7	4.7	2.0	—	18.4	100.0

N.R. = No response.

TABLE 4

Percent distribution of girls by grade (Standard) studied at the time of menarche and respondents' opinion of grade for starting family life education for girls

*Standard	VI	VII	VIII	IX	X	XI	XII	N.R.	Total
**Standard studying at time of menarche*	8.9	13.7	45.2	19.1	—	—	—	13.1	100.0
**Ideal Standard for starting FLE*									
Principals		18.5	74.1	3.7	3.7	—	—	—	100.0
Teachers		23.9	55.0	12.1	5.4	1.8	1.1	0.7	100.0
Parents		22.6	50.1	26.1	1.0	—	—	0.2	100.0
Students		39.8	51.5	4.8	1.1	—	—	2.8	100.0

N.R. = No response.

themselves expressed this opinion. None of the principals favoured the introduction of family life education post-menarche, as compared to 5.4 per cent and 1.6 per cent of the teachers and girls respectively. Among parents, three-fourths (77.4 per cent) felt that family life education should be given prior to attaining menarche, 7.8 per cent favoured it after menarche, and as many as 14.8 per cent did not respond. Thus, in the formal sector, the school grade is a decisive factor while in the non-formal sector, the age at menarche can be used to determine the stage at which family life education can be introduced to young people.

A reasonable majority of the respondents (62-72 per cent) were in favour of starting family life education at the age of 12-13 years (Table 3) for girls. The next largest group among both parents and students was the earlier age group of 10-11 years compared to principals and teachers who opted for 14-15 years. Grade-wise, as Table 4 indicates, the majority of the respondents agreed that family life education should be started in Standard VIII. While the principals, teachers and students favoured a lower grade—Standard VII—as next in order of preference, the parents' choice was divided more or less equally between the lower and higher grades with 22.6 per cent and 26.1 per cent opting for Standards VII and IX respectively. The age at menarche can be used as a guideline for selecting the grade in which to start a family life education course.

Students' opinion of who should teach family life education?

All the students were studying in Standard IX and had received family life education in Standards VIII and IX from trained, volunteer lady teachers of the FPAI Pune Branch. This was reflected in their responses in that the boy students expressed a nearly equal preference for doctors (39.8 per cent) and volunteer teachers (35.6 per cent) to teach family life education. On the other hand, the first preference of the girl students was volunteer teachers (51.10 per cent), with a nearly equal second preference for teachers (25.9 per cent) and doctors (23.0 per cent), but of their own sex. It is worth noting that about 4.5 per cent of the boy students considered their own parents as suitable for imparting such knowledge, while none of the girl students wanted to consult their parents on the subject. This observation is rather difficult to interpret.

Teachers (17.5 per cent) who are reluctant to teach the subject suggested doctors and specialists such as trained social workers as alternative trainers. The students also preferred them to teachers and parents. Specialists such as doctors, health educators and trained volunteers are therefore required on a large scale to work in schools (as per their schedule) which are interested in offering family life education. However, this is not a practical proposition. For example, while it was possible for us to get socially-oriented female volunteers who were willing to be trained to impart family life education, our attempts to enlist male volunteers for the purpose did not meet with success. Men are the breadwinners of the family, and those who had retired from active service were either not willing to undertake such activities or did not possess the necessary qualities of an effective sex educator (this was observed in the course of our discussions with such groups).

Why do teachers not want to actively participate in family life education programmes?

The following reasons were mentioned by the teachers (17.5 per cent) for their reluctance to teach family life education:

1. The timetable is full and cannot accommodate additional subjects (to be taught during school hours). Moreover, they are already over-burdened with their regular subjects and are not prepared to put in extra hours in order to teach family life education.
2. Special skills are required to impart family life education; all teachers are not trained, and as such, have no liking for the subject.
3. Boys and girls have a different image of their teachers. Teaching this subject would create an embarrassing situation for teachers and students alike, making it very difficult to establish an open dialogue on the subject. Instead, the students would feel more free and comfortable with a family life educator from outside the institution.
4. Sex language itself poses a great barrier—they are not familiar with sex vocabulary, and it would be particularly difficult to communicate in the regional language.
5. The teachers would probably be more inclined to tell the students to read from their book at home, rather than take it up in class.

The teachers therefore suggested that family life education could be taken up by persons belonging to the medical profession or by specially trained social workers (at the time of the survey, the family life education programme was being conducted in the schools from where the respondents were drawn by volunteers trained by the FPAI Pune Branch).

Parents' willingness to teach family life education

About half (49.2 per cent) of the parents expressed their disinclination to undertake the responsibility for giving family life knowledge to young people, while 46.3 per cent were willing to do so, but felt that they would be able to do justice to the subject if they received some special training in it.

If the parents are communicative, expressive, devoted and have the aptitude to be good sex educators, then some of them could be trained to undertake family life education programmes in the non-formal youth sector. They could talk to adolescents on a one-to-one basis or in small groups to dispel the myths and misconceptions they may have about human sexuality and to resolve the doubts and anxieties relating to their body image and gender identity. By their own improved sexual and general behaviour—interpersonal relationships and roles (between man-woman, husband-wife, father-mother), they would be able to inculcate healthy and responsible attitudes and values related to sex and sexuality. Simple advice does not help.

Trained parents can promote sex education by creating a congenial atmosphere in public; they could be useful as good facilitators.

Those parents (49.2 per cent) who were not in favour of undertaking family life education work, felt that they themselves were ignorant about the subject and that it would be very embarrassing to teach adolescents. Like the teachers, they also felt that sex language itself posed a barrier especially when one had to communicate in the regional language, a task which they were not equipped to perform. However, they felt that teachers could be more objective than themselves in training students in family life education.

Family life education: Role of youth as facilitators

About 28.1 per cent of the boy students compared to an overwhelming 78.1 per cent of the girl students stated that they would feel comfortable to discuss problems concerning reproductive and sexual health that their younger brother or sister respectively may have, and to guide him or her properly after they had acquired sufficient knowledge in family life education themselves. The difference is easily understood as girls usually talk about problems related to reproductive health that is menstruation, since the menstrual phenomenon is not related to sexual urge, arousal or sexual behaviour. Boys, on the other hand, feel shy and embarrassed to talk about wet dreams, masturbation etc. to a younger brother as it is related to sexual behaviour.

When it comes to discussing and guiding a friend other than a younger brother, the percentage of boy students who felt confident enough to do so, rose to 89.3 per cent—because in the case of a friend, the question of feeling shy or getting embarrassed does not arise. However, whether it was a younger sister or friend mattered very little to girl students as menstruation is a physical manifestation of growing up which does not remain a secret and is unrelated to sexual behaviour.

We also observed that as many as 44.8 per cent of the boys received information on sex (right or wrong) from their peers in the course of routine conversations. This mode of one-to-one communication can be best utilised by identifying youth leaders who exercise natural leadership trends among their peers, and giving them thorough and extensive training in sexual health. Such communicators can do much to provide accurate information and develop responsible attitudes to sex among the younger generation. In this context, it may be mentioned that the Family Planning Association of India has been conducting workshops during the past six years to train youth leaders to function as effective sex educators among their peers.

Need for a permanent counselling centre for youth

Our study shows that 20 per cent of the boys and a bare 3 per cent of the girls were able to get scientific information on sex from scientific books, while 41 per cent of the boys and 13 per cent of the girls received information on sex and sexual behaviour through television shows and advertisements. Further, while 31 and 22 per cent of the boys had access to pornographic literature and blue films respectively, none of the girls had any access to these media. Overall, nearly 50 per cent of the boys and girls received information on sex in some form or other, from their peer groups. Thus, the need for a permanent counselling centre to guide them in matters concerning reproductive and sexual health, was expressed by as many 94.2 per cent of the boys and over half (53.6 per cent) of the girls.

Our experience at the various seminars on sexual health and at the youth counselling centre are in conformity with the opinions expressed in this survey. Girls ask a few questions and that too, related to menstruation and gynecological disorders. Their attendance at the counselling centre is also very poor as compared to that of the boys. On the other hand, the boys ask a number of varied questions more often related to virility, wet dreams, masturbation, size of the penis, coitus during periods or pregnancy and so on. The boys consider 'sex' as more performance (physical) oriented. They feel that they are the active sex partners—they have their own doubts and anxieties and at the same time, they are the victims of dirty sex (STDs and AIDS) and sex addiction. These views probably account for the greater need for a permanent counselling centre felt by boys as compared to girls.

ECONOMIC MOTIVATION AND FERTILITY BEHAVIOUR: A COMPARISON OF RURAL AND URBAN AREAS IN TAMIL NADU

MR. S. THIRUVENKITASAMY*

INTRODUCTION

Fertility behaviour in India, as anywhere else, is subject to socio-economic conditions as well as religious and cultural traditions. Not only is the fertility decision of couples influenced by a wide range of factors such as education, the position of women and their participation in the work force, economic condition, urbanisation, social security systems and so on, but it differs between husband and wife[1] and between urban and rural areas.

From the economic point of view, besides other factors, couples want more children in order to supplement the family income and as a means of economic support in their old age. This motivation exerts a powerful influence on fertility increase all over the world and especially in developing countries like India[2-8]. Further, the economic motivation for children exerts a weaker influence in urban areas than in rural areas where the demand for child labour in agricultural and allied activities is greater. The changing behaviour of parents then turns towards the sex composition of children; as they expect more old age support from male children, they prefer sons resulting in an increase in fertility and poor attitudes towards family planning both in urban and rural areas. Many studies have reported the strong son preference prevalent in India[9-14].

Traditionally, apart from social prestige and the felt need to continue the family line, the existence of sons is considered very important for old age support[15-18]. That this strong preference for sons can lead to female infanticide in rural areas is known, and sex differentials in child mortality have also been reported[19-22]. In recent times however, demographers have declined from their stand that son preference and old age security are major factors in the fertility decision-making process of parents in developed countries. But in developing countries like India, this tendency exists even today, resulting in fertility increase.

OBJECTIVES

This study focuses on the intensity of preference for sons over daughters in anticipation of old age security both physically and financially, and its impact on fertility behaviour of urban and rural households in Tamil Nadu.

An effort has also been made to analyse the rural-urban differentials in these parameters in relation to fertility decision-making. The intention also is to explore and examine the reasons for wanting sons and daughters and for educating them, and the actual, desired and ideal family size of the households. While a large number of studies have addressed these issues, no major attempt has been made to analyse urban-rural differentials in attitudes with regard to son preference and old age security motives of households in Tamil Nadu. The present study therefore attempts to fill this gap.

DATA AND METHODOLOGY

Data for the study were obtained from 400 households from the urban and rural areas of Tamil Nadu by using multistage random sampling. In the first stage, all the districts of Tamil Nadu were ranked by cumulative scores of performance of 16 basic socio-economic and demographic indicators from the 1981 Census. From this, two districts which showed the best and worst performance, viz. Madurai and Dharmapuri respectively were selected. Next, four taluks—the best and worst performing, again based on the same indicators—were selected from each district. These were respectively, Uthamapalayam and Andipatti taluks from Madurai district and Krishnagiri and Pennagaram taluks form Dharmapuri district. One village and one urban ward was then selected randomly from each of the four taluks to provide rural and urban households respectively. In the last stage, 50 households from each village and ward were selected randomly; households without children and aged couples were not included in the sample. In almost all cases, both the husband and wife from the selected household were interviewed. The questionnaire was administered between February and September 1990.

RESULTS AND DISCUSSION

Attitudes regarding sons

Table 1 presents the attitudes of the couples in relation to sons. More rural couples (67 per cent) compared to their urban counterparts (42 per cent) considered it "very important" to have at least one son. Likewise, more urban than rural couples considered it "somewhat important" or "unimportant" (49.0 and 32.5 per cent, and 9.0 and 0.5 per cent respectively). Interestingly however, a sizeable number of rural couples compared to urban (72 and 55 per cent respectively) considered two children to be enough, irrespective of sex.

A district-wise comparison indicates that both urban and rural couples

TABLE 1

Percent distribution of urban and rural respondents by attitudes regarding sons

	Madurai		Dharmapuri		Combined		Total
Attitude	Urban N=100	Rural N=100	Urban N=100	Rural N=100	Urban N=200	Rural N=200	N=400
How important is it to have at least one son?							
Very important	70	82	14	52	42.0	67.0	54.5
Somewhat important	16	18	82	47	49.0	32.5	40.8
Unimportant	14	0	4	1	9.0	0.5	4.8
If you don't get a son, what would you do?							
Continue until a boy comes	9	6	8	13	8.5	9.5	9.0
Stop after getting girls	52	60	92	86	72.0	73.0	72.5
Uncertain	39	34	0	1	19.5	17.5	18.5
Does a greater number of sons mean higher social status?							
Yes	18	29	17	15	17.5	22.0	19.8
No	73	65	83	85	78.0	75.0	76.5
No opinion	9	6	0	0	4.5	3.0	3.8
Do you consider two children to be enough, regardless of sex?							
Yes	71	99	40	45	55.5	72.0	63.8
No	20	1	60	55	40.0	28.0	34.0
No idea	9	0	0	0	4.5	0.0	2.3
Does a larger family mean better security in old age?							
Yes	16	21	21	23	18.5	22.0	20.3
No	82	78	79	77	80.5	77.5	79.0
No idea	2	1	0	0	1.0	0.5	0.8
Is a son essential to perform funeral duties?							
Yes	79	59	81	87	80.0	73.0	76.5
No	6	41	17	10	11.5	25.5	18.5
Other	15	0	2	3	8.5	1.5	5.0

Note: Data collected by the author for his doctoral dissertation.

in Madurai district thought it "very important" to have at least one son (70 and 82 per cent respectively compared to 14 and 52 percent in Dharmapuri) while in Dharmapuri, more couples accorded it as "somewhat important":

(82 and 42 per cent of urban and rural respectively compared to 16 and 18 per cent respectively). Overall, both urban and rural households considered having at least one son as important, indicating the general tendency to value sons more than daughters.

It is surprising that though sons are obviously preferred, almost 72-73 per cent of all couples indicated their willingness to limit family size if they got only female children, probably because of the fear of dowry and so on[18]. More urban than rural couples in Dharmapuri expressed this opinion while the reverse was true of Madurai district. Further, while only a few couples (9 per cent) wished to continue childbearing until a male child was born, about 18 per cent of both urban and rural couples were unable to give a specific answer indicating that they wanted at least one but not many sons.

Table 1 also shows that while over three-fourths of all couples (76.5 per cent) did not equate a greater number of sons with higher social status, though among those who did think so, rural rather than urban couples were more likely to believe so (22 and 17 per cent respectively). No significant inter-district differences were evident in this regard. The findings also indicate that despite a preference for sons, as many as 80.5 per cent of all urban couples and 77.5 per cent of all rural ones did not consider a large family as better security in old age. Again, among those who held this view, there were fewer urban than rural couples (18.5 and 22 per cent respectively). This attitude was more prevalent in Dharmapuri district than in Madurai district.

Traditionally, one of the major reasons for having sons is to perform the funeral rites of the parents[23]. As revealed in Table 1, more urban compared to rural couples agreed with this belief (80 and 73 per cent respectively); likewise, fewer urban than rural couples did not consider a son as essential for performing their last rites (11.5 and 25.5 per cent respectively). This is contrary to the expectation that rural couples tend to be more tradition-bound and hold orthodox views. District-wise, households in Dharmapuri district were observed to be more traditional than those in Madurai.

Reasons for wanting sons

Table 2 presents the reasons expressed by the couples for wanting sons and daughters. The findings reflect greater similarities in responses between urban and rural couples. More than half of both urban and rural couples wanted sons for old age security. This was more evident in the Madurai sample than in the Dharmapuri sample. Both urban and rural households expected greater physical as well as financial help during their old age from their sons than from their daughters[24]. Old age security was the foremost reason for wanting sons expressed by both urban and rural respondents (53.5 and 54.5 per cent respectively). This was followed by the son's financial contribution to the family income (15.5 per cent and 21.5 per cent of urban and rural respondents respectively) rather than his help in working on the farm, family business, house and so on (1.5 and 3 per cent of urban and rural respectively). Among other factors which influenced son preference, emotional support was expressed by 14.5 per cent of both urban and rural couples with a higher response from those in Dharmapuri than Madurai. While more urban (12.5 per cent) than rural (5.5 per cent) couples wanted sons in order to continue their family line, the need for sons to meet religious obligations did not receive any significance in the study area.

TABLE 2

Percent distribution of urban and rural respondents by reasons for wanting sons and daughters

	Madurai		Dharmapuri		Combined		Total
Reasons N=100	Urban N=100	Rural N=100	Urban N=100	Rural N=200	Urban N=200	Rural N=200	N=400
For wanting sons							
Old age security	58	61	49	48	53.5	54.5	54.0
Financial contribution	22	18	9	25	15.5	21.5	18.5
Emotional support	8	11	21	18	14.5	14.5	14.5
Continue family line	7	8	18	3	12.5	5.5	9.0
Help in farm, house etc.	0	2	3	4	1.5	3.0	2.3
Religious obligations	5	0	0	2	2.5	1.0	1.8
For wanting daughters							
Emotional support	48	79	36	52	42.0	65.5	53.8
Help in farm, house etc.	33	18	48	26	40.5	22.0	31.3
Financial contribution	7	1	10	22	8.5	11.5	10.0
Religious obligations	3	0	0	0	1.5	0.0	6.8
Old age security	6	1	6	0	6.0	0.5	3.3
Continue family line	3	1	0	0	1.5	0.5	1.0

Data collected by the author for his doctoral dissertation

Reasons for wanting daughters

The pattern of reasons for wanting daughters is, as expected, quite different from that observed in the case of sons. The direction of the responses clearly leans towards the emotional motive in urban as well as rural areas (42.2 and 65.5 per cent respectively), with a dominance in rural households (Table 2). This is followed by their work contribution on the farm, house etc. rather than their financial contribution (from non-domestic activities), unlike in the case of sons where the latter received greater importance, Daughters are not given importance by parents as old age economic security[25] because they are considered as transitory family members.

By and large, sons were wanted for reasons of security - in their old age and earlier through their economic contribution to the family income, from non-domestic work (19 and 54 per cent respectively compared to 3 and 10 per cent in case of daughters), while daughters were valued for emotional support and their work contribution in domestic (non-economic) terms (54 and 31 per cent respectively compared to 15 and 2 per cent in case of sons). About 7 per cent of all couples wanted daughters to fulfill certain religious duties during festivals etc. (compared to 2 per cent who wanted sons for the same purpose).

Reasons for educating children

The reasons for educating children also showed gender variations, although the couples indicated their willingness to educate both. Table 3 presents the findings on this aspect of the study.

TABLE 3

Percent distribution of urban and rural respondents by reasons for educating sons and daughters

	Madurai		Dharmapuri		Combined		Total
Reasons	Urban N=100	Rural N=100	Urban N=100	Rural N=100	Urban N=200	Rural N=200	N=400
For educating sons							
Career and employment	50	60	82	75	66.0	67.5	66.8
Status	7	5	3	5	5.0	5.0	5.0
Intelligence	21	4	8	6	14.5	5.0	9.8
Essential	13	30	2	5	12.5	17.5	12.5
Don't want	9	1	5	9	12.0	5.0	6.0
For educating daughters							
Good marriage	47	31	12	28	29.5	34.5	32.0
Autonomy	20	47	29	13	24.5	30.0	27.3
Status	3	20	32	4	20.0	12.0	16.0
Earning potential	1	1	22	36	11.5	18.5	15.0
Don't want	24	1	5	9	14.5	5.0	9.8

Data collected by the author for his doctoral dissertation

The majority of all couples wanted to educate their sons in the hope of getting economic security during their old age; they expected to get better security only if their children were economically well-off. About 67 percent of both urban and rural couples thought that education would mean a better career and employment for their sons, a view which was more commonly expressed in Madurai than in Dharmapuri. However, a small percentage of couples (12 per cent of urban and 5 per cent of rural) did not want to educate their sons probably because of their own economic backwardness and fear of immorality—this was more evident among urban than rural households because the economic crisis is more severe in urban areas as also the cost of schooling. It also suggests that people in rural areas are beginning to realise the importance of education, and may augur well for fertility reduction in the coming generations. While a small percentage—probably those belonging to the better-off business communities, considered education to be a status symbol, it was of interest to observe that about 10 per cent and 13 per cent of all couples wanted to educate their sons purely for knowledge/intelligence and because they considered it "essential" respectively. The latter two reasons were more often mentioned by the Madurai sample than the Dharmapuri one.

The reasons for educating daughters were quite different as education was considered essential not so much for getting a good job as for getting a good life partner (32 per cent of all couples) as shown in Table 3. This tendency exists more among rural sample households than urban households and has also been reported between the husband and wife[1]. A notable observation is that parents--both urban and rural—wanted to educate their daughters for reasons of providing autonomy and independence (27.3 per cent). Further, since the parents' aspirations moved towards economic freedom for their daughters, they wanted to see their daughters employed; hence their purpose of educating them to develop their earning potential (15 per cent of all couples). As in the case of sons, about a tenth of the parents did not want to educate their daughters at all.

When one looks at the two districts, the importance given to the education of both sons and daughters was greater in Madurai than in Dharmapuri, and higher among rural than urban households. Another notable feature is the desire of rural couples in Madurai district to educate their daughters as a means to autonomy (47 per cent compared to 20 per cent of couples in urban Madurai, and 29 and 13 per cent of urban and rural couples respectively in Dharmapuri).

Actual, desired and ideal family size

Actual family size

Family size is defined as the number of living children in a family excluding their parents and others. The preference for sons and expectation of old age security are also influenced by actual, desired and ideal family size. Table 4 presents the actual, desired and ideal family size of the sample households.

TABLE 4

Percent distribution of urban and rural respondents by actual, desired and ideal family size

	Madurai		Dharmapuri		Combined		Sample
Children	Urban	Rural	Urban	Rural	Urban	Rural	N=400
	N=100	N=100	N=100	N=100	N=200	N=200	
Actual family size							
1	1	0	0	0	0.5	0.0	0.3
2	33	32	37	34	35.0	33.0	34.0
3	40	41	48	39	44.0	40.0	42.0
4	16	16	13	23	14.5	19.5	17.0
5	6	6	0	2	3.0	4.0	3.5
6	4	5	2	2	3.0	3.5	3.3
Desired family size							
1	5	3	2	3	3.5	3.0	3.3
2	48	50	40	40	44.0	45.0	44.5
3	35	30	56	50	45.5	40.0	42.8
4	12	17	2	7	7.0	12.0	9.5
5	0	0	0	0.0	0.0	0.0	0.0
6	0	0	0	0	0.0	0.0	0.0
Ideal family size							
1	9	4	1	1	5.0	2.5	3.8
2	69	74	50	58	59.5	66.0	62.8
3	22	19	46	38	34 0	28.5	31.3
4	0	3	3	3	1.5	3.0	2.3
5	0	0	0	0	0.0	0.0	0.0
6	0	0	0	0	0.0	0.0	0.0

Data collected by the author for his doctoral dissertation

The average actual family size was higher for the rural sample than for the urban sample (2.94 and 3.05 respectively); the overall actual family size (mean) for the study area was 2.96. Only one couple in the total sample had an actual family size of one perhaps as a result of child loss subsequent to the adoption of a permanent method of family planning. While there was a slightly higher representation of couples with two (35 and 33 per cent respectively) and three (44 and 40 per cent respectively) children among urban compared to rural couples, those with four children were better represented in the rural than in the urban sample (19.5 and 14.5 per cent respectively). Households with 5 and 6 children constituted only about 3 per cent of both urban and rural samples. Even though significant inter-district differences in actual family size were not evident, a slight variation could be noted. The mean actual family size in Dharmapuri was lower than in Madurai for both the urban and rural samples (Table 5).

Desired family size

The desired family size of the respondents is also presented in Table 4. The two-child family norm was more or less equally desired by both urban and rural couples (44 and 45 per cent respectively) while a slightly higher proportion (46 per cent) of urban compared to rural (40 per cent) couples wanted three children. Overall, nearly 90 per cent of all couples wanted either two or three children. More couples in urban and rural Madurai (48 and 50 per cent respectively) compared to their counterparts in Dharmapuri (40 and 40 per cent respectively) opted for a two-child family. On the other hand, three children constituted the desired family size of more urban and rural couples in Dharmapuri (56 and 50 per cent respectively) compared to their counterparts in Madurai (35 and 30 per cent respectively). This desire for more children depends upon the sex composition desired, and reflects attitudes of gender preference.

The average desired family size did not show any significant difference: it was 2.56 for the urban sample and 2.60 for the rural sample. The mean desired family size in urban Madurai was lower than that in urban Dharmapuri but higher when the rural averages were compared (Table 5). By and large, the actual mean family size was higher than the mean desired family size in all cases.

TABLE 5

Mean of actual, desired and ideal family size* by urban and rural respondents

	Madurai		Dharmapuri		Combined		Total
	Urban N=100	Rural N=100	Urban N=100	Rural N=100	Urban N=200	Rural N=200	N=400
Actual family size	3.05	3.11	2.82	2.99	2.94	3.05	2.96
Desired family size	2.54	2.61	2.58	2.59	2.56	2.60	2.58
Ideal family size	2.13	2.21	2.51	2.43	2.32	2.32	2.32

* Family size is used to mean the number of children, excluding parents

Data collected by the author for his doctoral dissertation

Ideal family size

Table 4 further indicates that over three-fifths (62.8 per cent) of all couples considered a two-child family as ideal, and a third (31.3 per cent) considered three children as ideal. While the former was preferred by more rural couples (rural: 66.0 per cent; urban: 59.5 per cent), the latter was prefereed by more urban couples (urban: 34.0 per cent; rural: 28.5 per cent). Only nine couples considered four children as the ideal number. District-wise, more couples in the Madurai sample (urban: 69 per cent; rural: 74 per cent) were in favour of an ideal of two children than couples in the Dharmapuri sample (urban: 50 per cent; rural: 58 per cent), and twice as many couples in Dharmapuri (urban: 46 per cent; rural: 38 per cent) favoured an ideal of three children compared to their Madurai counterparts (urban: 22 per cent; rural: 19 per cent).

Again, no difference in mean ideal family size was observed between the urban and rural samples; it was 2.32. The mean ideal family size in Madurai district was lower than that (2.13 for urban and 2.21 for rural) in Dharmapuri district (2.51 for urban and 2.43 for rural). It was also lower than that estimated (3.2) by Khan and Rao for Bihar[8]. Further, while in Madurai, the mean ideal family size of the urban sample was lower than that of the rural, in Dharmapuri, it was the reverse (Table 5).

CONCLUSION

The results of the above study show that a son is essential for all couples, because of the powerful need for old age security that exists in urban and rural areas alike. Even though there is strong preference for sons, parents are inclined to stop after getting a certain number of girl children (and no boys) due to the high marriage costs of daughters. The responses of rural couples appear to favour fertility reduction, though the level of literacy is higher in urban areas. The belief that larger families mean greater old age security did not receive much acceptance in urban and rural areas. Generally, all parents preferred a son to a daughter mainly for old age security and financial help, along with other expectations such as continuity of family line, performing funeral rituals etc. However, to what extent such benefits are actually received by parents is questionable. If so, the problems encountered by aged persons[26] would not have arisen. Hence, in order to prevent population growth, the Government should make efforts to reduce son preference and provide old age security benefits, pensions and so on.

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SETTING CONTRACEPTIVE ACCEPTOR TARGETS FOR SMALL REGIONS

DR. P.M. KULKARNI*

INTRODUCTION

Many national family planning programmes prescribe targets for recruiting contraceptive acceptors which, if achieved, would lead to the desired demographic goal. A number of techniques are available for setting targets. The basic principles of target setting are described by Nortman et al[1], and Bongaarts and Stover[1] have reported a more recent approach. Since the goal is proposed to be achieved by a specified date, the targets need to be given for the entire period between the starting point (the baseline) and the time by which the goal is to be attained. Though in theory the ultimate goal can be achieved via a large number of possible time paths, in practice, targets corresponding to a small number of alternate plausible paths are given. Since many family planing programmes provide for more than one contraceptive method with varying levels of effectiveness and use continuation, target setting procedures provide targets for one or more specified distributions by method (called 'method-mix').

Such procedures are generally used for target setting at the national level or for large states/provinces. However, data requirements and the complexities of the procedures have probably prevented their use at the sub-regional level - for districts, counties etc. The general practice has been to allocate national/state targets to sub-regions in proportion to their populations with occasional *ad hoc* adjustments. This is a good procedure if it can be assumed that related factors do not vary much across the sub-regions. Since there is a certain amount of homogeneity within regions, natural fertility, marriage patterns, breastfeeding practices, etc. may not vary much among sub-regions. However, the base level prevalence rates are often found to vary considerably from one sub-region to another. For instance, among the major states of India, contraceptive prevalence rates in 1985 ranged between 17 and 52 per cent, and among districts (with populations generally exceeding one million) within individual states the range was often of 30-40 points.

OBJECTIVES

With such variations in the base level prevalence rates, how appropriate is a proportional allocation of targets? Alternatively, can some procedure, less laborious than the one normally used, be adopted to set targets for small regions? An attempt is made here to address these questions.

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Relationship between base-level prevalence and acceptor targets

Suppose a country or a province has a number of sub-regions. The demographic goal is specified for the entire country and each sub-region is expected to move towards this common goal. The demographic goal can be translated into a targeted contraceptive prevalence level based on assumptions about the level of mortality, proportions married, fertility of non-acceptors, etc. So long as these factors do not vary much across the sub-regions, the targeted contraceptive prevalence level at the end of the programme period would be almost the same for the sub-regions. Now suppose that the initial contraceptive prevalence level varies across the sub-regions, it would appear, then, that sub-regions with initially low levels of contraceptive prevalence be assigned proportionately higher acceptor targets to enable them to catch up with the rest. Sub-regions with initially high contraceptive prevalence levels would, naturally, be given lower targets. But such sub-regions, since they happen to have a large number of users initially, would obviously lose many due to attrition - ageing, discontinuation, death - and just to maintain the high initial level they will have to recruit many new acceptors. This is summarised below:

	Initial contraceptive prevalence level High	 Low
Acceptors needed to raise the prevalence level	Not many	Many
Acceptors needed to make up for attrition losses	Many	Very few

Thus, sub-regions with initially low levels of contraceptive prevalence as well as those with initially high levels will require many new acceptors to reach or maintain a high level of contraceptive prevalence. Therefore, the overall effect of the initial level of contraceptive prevalence on acceptor targets is not likely to be strong.

The results of some target setting exercises support this observation. Srinivasan et al[3] has provided targets for achieving replacement level fertility for 17 major states of India. A scientific procedure similar to the TABRAP technique of Nortman et al[1] was adopted for the purpose. Computations based on these targets showed that the correlation coefficient between the initial contraceptive prevalence level and the average acceptor target during the next five years is 0.26, and between initial contraceptive prevalence and the average target during the subsequent five years, −0.32[4]. Both the coefficients are quite small (and not significant given that n = 17).

If the influence of the initial prevalence level on target is very weak, does it make sense to ignore this in setting targets? This is explored below.

Acceptance, attrition and prevalence

The prevalence level at a point in time depends on the prevalence level at a time in the past, and the acceptance, attrition, and growth in the interim period. In a continuous time framework, this relationship can be expressed in the form of a differential equation.

Let
$M(t)$ = Number of married women of reproductive age (MWRA) at time t,
$C(t)$ = Number of couples (with wife in the reproductive age) protected by contraception at time t,
$O(t)$ = Contraceptive prevalence rate at time t
= $C(t)/M(t)$,
$r(t)$ = Growth rate of MWRA at time t,
$s(t)$ = Attrition rate among users at time t,
$a(t)$ = Acceptance rate (acceptors as proportion of MWRA) at time t,

where t is the time since the beginning of the programme. The terms $r(t)$, $s(t)$ and $a(t)$ are instantaneous rates, that is, for small t, number of acceptors during $(t, t+\delta t)$ equals $a(t).M(t).\delta t$, etc. Further, s(.) includes attrition due to discontinuation, ageing, and mortality together. Note that the acceptance rate is defined in terms of acceptors as proportion *all* MWRA, including users and non-users, at time t, and not as a proportion of non-users as is often done. Since,

$$\begin{aligned} C(t+\delta t) &= \text{users at time } (t+\delta t) \\ &= \text{users at time } t + \text{acceptors during } (t,\ t+\delta t) - \text{attrition during } (t,\ t+\delta t) \\ &= C(t)+a(t).M(t)\delta t - s(t)C(t).\delta t \end{aligned}$$

it follows that,

$$C'(t) = a(t)M(t) - s(t)C(t)$$

Besides,

$$M'(t) = r(t).M(t).$$

Now, by differentiating $O(t) = C(t)/M(t)$ with respect to t,

$$\theta'(t) = \frac{C'(t)}{M(t)} - \frac{C(t)M'(t)}{[M(t)]^2}$$

Substituting $C'(t)$ and $M'(t)$ and simplifying, we get

$$\theta'(t) = a(t) - \theta(t)[s(t)+r(t)] \qquad (1)$$

From this equation, it is clear that if $a(t)$ equals $\theta(t)[s(t)+r(t)]$, then $\theta'(t)$

equals 0 and $\theta(t)$ remains unchanged. In this case, the acceptance exactly balances the effects of attrition and growth in MWRA.

Now, suppose, at the beginning of a programme the population is growing very rapidly, that is, $r(o)$ is large, due to high fertility. The contraceptive prevalence level would then be quite low, say θ_0 $(= \theta(o))$. The goal is to reduce the growth rate by raising the contraceptive prevalence level to a value θ_1 ultimately. If the contraceptive prevalence rate stabilises at θ_1, the growth rate would also stabilise at, say, r_1, provided other parameters are held constant. Since most programmes seek to achieve a zero or very low positive growth rate, it may be assumed that $r_1 \geqslant O$. Now, an acceptor target $a(t) = \theta(t)[s(t)+r(t)]$ will keep the contraceptive prevalence level unchanged at θ_0, and it would not reach the higher value 0_1. Instead, let the acceptor target after time 0 be given by the rate:

$$a(t) = \theta_1[s(t)+r(t)] \tag{2}$$

It is assumed here that $[s(t)+r(t)] > 0$. Since $s(t)$ must be positive and $r(t)$ non-negative (unless a negative growth rate is to achieved) this condition will be satisfied.

Substituting $a(t)$ from (2) into (1) yields,

$$\begin{aligned} \theta'(t) &= \theta_1[s(t)+r(t)]-\theta(t)[s(t)+r(t)] \\ &= [\theta_1-\theta(t)]\,[s(t)+r(t)] \end{aligned} \tag{3}$$

Solving the equation and simplifying, $\theta(t)$ can be obtained as:

$$\theta(t) = \theta_1 - (\theta_1-\theta_0)e^{-\int_0^t (s(u)+r(u))du} \tag{4}$$

Thus, if the acceptance rates after time 0 are given by (2), the trajectory of the contraceptive prevalence rate will be given by (4). It can be easily shown that

$$\theta(t) \to \theta_1 \text{ as } t \to \infty$$

provided the integral $-\int_0^t [s(u)+r(u)]du \to \infty$, a condition that will be satisfied in most cases.

This implies that the acceptor target in (2) will lead, ultimately, to a contraceptive prevalence level of θ_1, which is the goal. Note that $a(t)$ in (2) does not depend, at least explicitly, on the initial contraceptive prevalence level θ_0. The initial level may have some influence on the attrition rate since the age profile of users at a low level of contraceptive prevalence could be different from that at a high level. Besides, the growth rate r(t) would tend to be higher at low levels of contraceptive prevalence. But once these two factors, attrition and growth, are controlled for, the target acceptance rate given in (2) would lead to the desired contraceptive prevalence level θ_1 regardless of the initial prevalence level θ_0.

If the prevalence level remains at 0_1 for a sufficiently long time, and other parameters do not change, the population will reach the stable state with a growth rate of r_1. Further, the attrition rate will also stabilise at some value s_1 as long as the method-mix and the age distribution at acceptance do not change. In that case, a(t) will converge to $\theta_1(s_1+r_1)$ which will be the acceptance rate needed in the long run to maintain the prevalence level of θ_1.

Thus, an acceptance schedule given by the acceptance rate, $\theta_1[s(t)+r(t)]$ will, over time, result in the desired prevalence level θ_1 regardless of the initial prevalence level and the acceptance rate will itself converge to $\theta_1(s_1+r_1)$.

A special case is that the ultimate prevalence level corresponds to replacement level fertility, so that $r_1 = 0$. The acceptance rate will then converge to $\theta_1 s_1$, as noted by Jain[5].

Convergence of the contraceptive prevalence rate 0(t)

Most programmes that set a demographic goal want it to be achieved within a specified time span. Naturally, setting targets that would achieve the goal only in the long run would not be satisfactory. However, the specified length of time allowed to attain the goal is usually meant to give an indication of the order of magnitude rather than a firm time limit. That is, if it is specified that the goal of replacement level fertility should be reached at the end of 30 years since the inception of a programme, it should be taken to mean that the fertility level should be very close to the replacement level by the end of the target period. Therefore, if the desired level of prevalence is θ_1, the target schedule that brings the prevalence level very near θ_1 within a reasonable time would serve the purpose. Hence, the acceptance rate given in (2) would be good if within a short enough time $\theta(t)$ comes close to the ultimate level θ_1, or, in mathematical terms, if the rate of convergence is rapid.

From (4), it can be observed that the convergence would be rapid if $(\theta_1-\theta_0)$ is small, or if values of $[s(t)+r(t)]$ are large. The first condition is not of much interest since a small value of $(\theta_1-\theta_0)$ implies that the prevalence level is close to the desired level even at the beginning of the programme. In order to see how rapidly $\theta(t)$ would converge to θ_1 when $(\theta_1-\theta_0)$ is not very small, values of $\theta(t)$ have been computed for a number of plausible values of θ_0, s(t), r(t) and θ_1. Some simplifying assumptions are made here.

First, the attrition rate s(t) is assumed to remain constant over time, equal to s_1. This is mainly to avoid unnecessarily numerous alternate computations that would be induced by patterns of change in s(t). However, the computations have been performed for a number of values of s_1, in the range: 5-20 per cent. The growth rate r(t) will decline as the prevalence level rises thereby depressing fertility. The ultimate growth rate, r_1, is taken to be zero since most programmes have replacement level fertility as the goal. The value of r(t) is assumed to remain constant at $r_0(=r(o))$ during the first 20 years of the programme and then decline linearly to 0 over the next 70 years. Note that r(t) is the growth rate of the number of married women of reproductive age, and hence even after a programme is in force and brings about a fertility decline, its effect on r(t) will be lagged. If the population is stable initially, r(t) will remain unchanged at $r_0 = r(o)$ during an initial period of about 20 years since births before this age are not substantial. After that it will gradually decline to 0, which may take about 70 years, since generally about 2-3 generations (or a period of 55-80 years) are required for a destabilised population to reach a newly stabilised level. Some alternative paths of decline in r(t) were also tried out. These included variations in the initial period of lag, in the time required for decline, and an exponential rather than a linear decline in r(t). Finally, two values of the ultimate contraceptive prevalence level θ_1 were used: 60 and 70 per cent. In most populations, the contraceptive prevalence level corresponding to replacement level fertility would be in the neighbourhood of one of these values.

Values of θ(t) have been computed using (4) when the acceptance rate is specified by (2). In Table 1 (and in Fig.1) the paths of θ(t) for different values of the initial contraceptive prevalence level, θ_0 have been given; the attrition rate s_1 is assumed to be 10 per cent and the growth rate r_0, 2 per cent. It can be seen that in all the cases, by the end of 20 years, θ(t) is very close to θ_1. Naturally, the higher the initial level θ_0, the path of θ(t) is closer to θ_1. An obvious corollary of the rapid convergence of O(t) is that the gap between the paths of θ(t) corresponding to different values of the initial level narrows quite rapidly.

For example, if the initial level is θ, in 10 years θ(t) reaches 41.9 per cent, whereas with an initial level of 20 per cent, θ(t) reaches 48.0 per cent in the same time. The initial gap of 20 percentage points reduces by only about 6 points in ten years, and further to less than 2 points at the end of 20 years. Similarly, an initial gap of 40 points (comparing the paths with 0 and 40 per cent initial contraceptive prevalence levels) reduces to about 12 points in 10 years, and less than 4 points in 20 years.

Other plausible paths of decline in r(t) give almost identical results, as do other likely values of r_0 (results not shown). This is because r(t) plays a relatively minor role in determining the acceptance rate or the path of the

FIGURE 1

Paths of prevalance rates for various initial prevalence levels

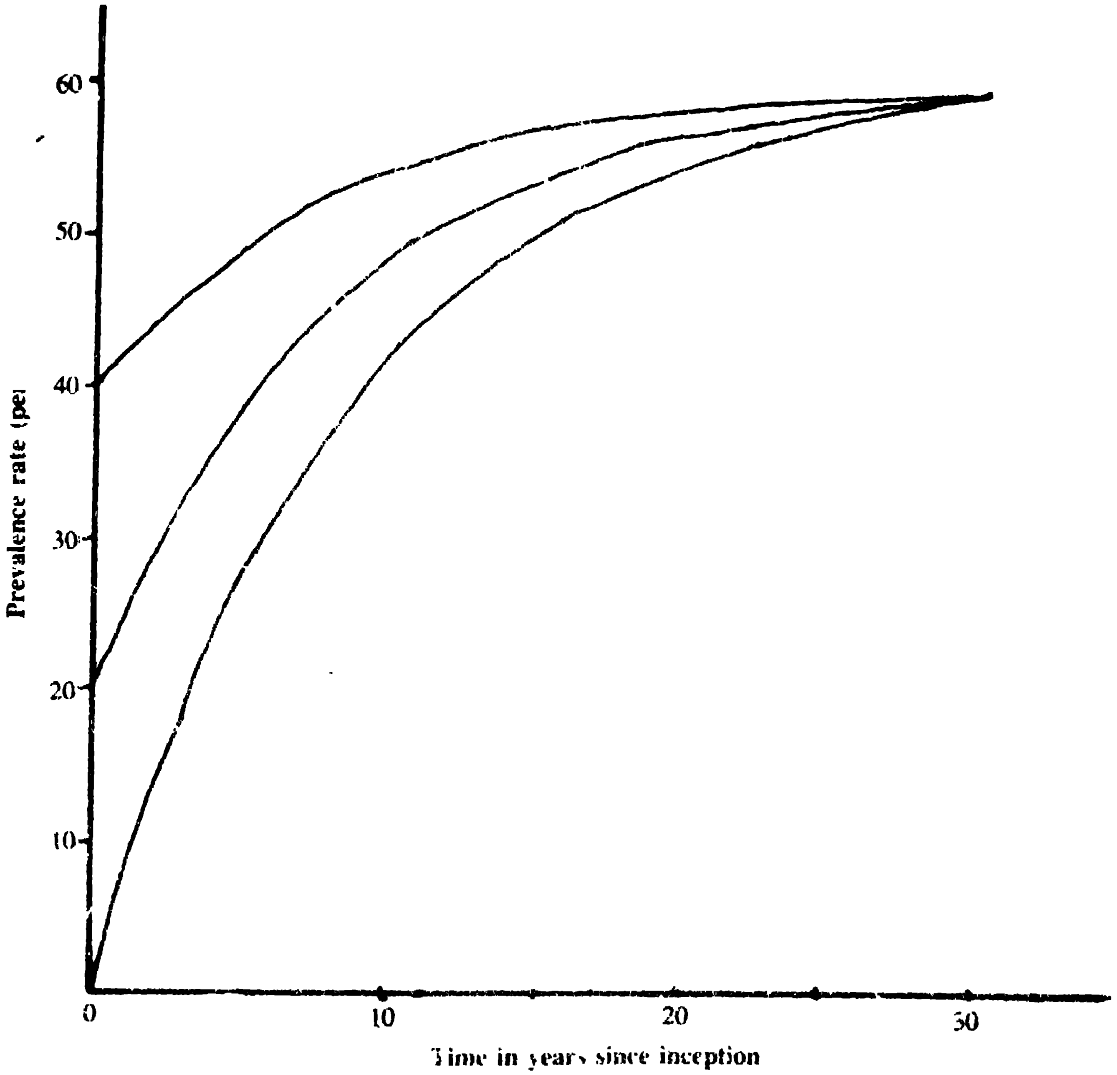

TABLE 1

Paths of contraceptive prevalence rates for varying initial levels of prevalence

Initial prevalence rate (%)		Time (in years since the beginning)					
		5	10	15	20	25	30
		Prevalence rate (per cent)					
		I. *(Desired level of prevalence: 60%)*					
0	0.0	27.1	41.9	50.1	54.6	57.0	58.3
20	20.0	38.0	48.0	53.4	56.4	58.0	58.9
40	40.0	49.0	54.0	56.7	58.2	59.0	59.4
		II. *(Desired level of prevalence: 70%)*					
0	0.0	31.6	48.9	58.4	63.6	66.5	68.1
20	20.0	42.6	54.9	61.7	65.5	67.5	68.6
40	40.0	53.5	61.0	65.0	67.3	68.5	69.2

Note: Constant parameters: Attrition rate = 10 per cent
Initial growth rate = 2 per cent.

contraceptive prevalence rate since the values of r(t) are quite small as compared to reasonable values of s(t). The latter, that is, the attrition rate, however, influences the rapidity of the convergence of $\theta(t)$ notably (Table 2). If the attrition rate is high (20 per cent), the convergence is extremely rapid. And if this rate is still higher, the contraceptive prevalence level will obviously move very close to the desired level 0_1 in only about 10 years (hence no computations are performed for attrition rates exceeding 20 per cent). However, if the attrition rate is very low, say 5 per cent, the convergence is slower.

TABLE 2

Paths of contraceptive prevalence rates for varying attrition levels

Attrition rate (%)	Time (in years since the beginning)			
	0	10	20	30
		Prevalence rate (per cent)		
5	20.0	40.1	50.1	55.0
10	20.0	48.0	56.4	58.9
20	20.0	55.6	59.5	59.9

Note:Constant parameters: Desired level of prevalence = 60 per cent, initial prevalence level = 20 per cent, initial growth rate = 2 per cent.

If a programme allows only sterilisation, the attrition rate would be quite low, around 5 per cent, since the attrition will only be due to ageing and death. When non-permanent methods are included, the attrition rate rises since there can be discontinuations as well. In programmes with an emphasis on the intra-uterine device (IUD), the attrition rate can be quite high - 30 per cent or even higher. Generally, with programmes allowing a mix of both permanent and temporary methods, the rate would be well above 5 per cent. In the Indian programme, which is known to be dominated by sterilisation users, this rate has been hovering around 12 per cent (excluding the use of methods such as the condom that need regular use). The computations indicate that for an attrition rate of this magnitude, the convergence of 0(t) is quite rapid. Programmes in many other countries are less dominated by sterilisation and hence have higher attrition rates. The convergence in such cases would be much more rapid.

Setting targets

The formula given in equation (2) can be used to give the targets in terms of acceptance rates. For this purpose, estimates of θ_1, s(t), and r(t) are required. The value of θ_1 depends on a number of factors and can be computed if the requisite information is available. However, often, a good guess can be made without going through detailed computations. It has been observed that for developed countries with near replacement fertility, short breastfeeding practices, late marriage, and low mortality, the contraceptive prevalence level normally falls in the range of 65-80 per cent[2].

For the major states of india, where breastfeeding is prolonged and mortality moderate, the prevalence level corresponding to the replacement level has been found to vary between 50-70 per cent (as seen from the computations by Srinivasan et al[3]). Therefore, if the goal is to reach replacement level, the value of θ_t can be chosen from the appropriate range. For most developing countries, 60 per cent would be a good guess; if the mortality is low, a slightly higher value may be chosen; if breastfeeding is not prolonged, again a higher value is required. The value of s(t) depends on the method-mix, age distribution of users, mortality and continuation rates. Mortality is not so important since only mortality in the childbearing ages matters and this is fairly low any way. Therefore, a good guess can be obtained based on the known value of the attrition rate in populations with a similar method-mix and acceptance age patterns. Lastly, there is generally no difficulty in obtaining an estimate of the growth rate r(t).

The acceptance rate a(t) proposed in equation (2) does not require attrition and growth rates, s(t) and r(t) respectively, remain constant over time. However, changes in these need to be recognised and used to modify the acceptance rate. Any change in r(t) plays a relatively minor role in determining the value of a(t) or the rapidity of convergence. On the other hand, the attrition rate may undergo changes if the age distribution and the method-mix of acceptors change drastically. This can happen if new methods become available or the continuation rates for methods like the IUD improve. Besides, there can be shifts towards a particular type of method. For example, if most couples in the middle reproductive ages are sterilised, new acceptors may have to be found among younger couples. Naturally, the method-mix will shift away from sterilisation and the age distribution will also be younger, causing a notable change in the value of s(t). All target setting procedures, elaborate ones like the TABRAP, or a simpler procedure as described here, need to take such changes into account.

A different approach may be used to set targets for contraceptives like the condom and oral pill. Some acceptors may use these methods regularly and some may use them occasionally or for short durations which makes it difficult to measure acceptance and continuation rates. Therefore, in order to estimate the total fertility impact of the use of such methods, it is convenient to use the volume of use (number of oral pill cycles or condom piece used) instead of their acceptance or prevalence rates. The target setting procedure can be slightly modified if the relative preference for these methods is known. For example, if the targeted prevalence rate is 70 per cent, and about a fifth of the use is expected to be of such methods, then 14 percentage points of prevalence could be allotted to these methods. The person years of effective use of these methods in a year should equal 14 per cent of married women of reproductive age and can, depending on the number of condoms/pill cycles required for one year of effective protection, be translated into targets of number of condom pieces/pill cycles to be used in one year. The remaining 56 per cent will form the desired prevalence level of methods like sterilisation and IUD. The value of θ_1 in equation (2) will then be 0.56 and the targets set accordingly.

It may be noted that the attrition rate s(t) refers to attrition among 'users' at time t. However, in the case of methods like the IUD, there is some discontinuation soon after acceptance. In such cases, formula (2) may be modified slightly. Suppose k is the proportion who terminate use soon after acceptance, a(t) may be written as:

$$a(t) = \theta_1[s(t)+r(t)]/(1-k)$$

so that after initial termination, $\theta_1[s(t)+r(t)]$ proportion of couples of reproductive age continue using the methods. If such an adjustment is made, the attrition rate, s(t) should not include early termination.

A shortcoming of the target setting procedure outlined here is that all the couples of reproductive age are treated as a singlejpool. Some target setting procedures do provide acceptor targets by five-year age groups. If this factor is to be incorporated in a model given here, equation (1) will have to be suitably modified to make it age specific. But this introduces complications in the mathematical treatment and the simplicity associated with the acceptance schedule in equation (2) gets lost in the process. Therefore, if one is interested in greater precision in target setting, some other procedure will have to be used.

If the time allowed to attain the demographic goal is very short, the procedure suggested here may not be found suitable. The contraceptive prevalence rate $\theta(t)$ would not generally be satisfactorily close to the desired level by the end of 5-10 years of a programme if the gap between the initial and the ultimate level is large. In such cases, other target setting techniques may have to be used. Of course, achieving a large increase in the prevalence level within a very short time may not be feasible and therefore such targets may not appear realistic. But this question is not being addressed here (for a discussion on feasibility of targets, see Nortman[6]).

Similarly, there can be difficulties in applying the procedure to very small regions like single villages or small towns. The age-sex and marital status distributions in some such small areas could be much different from the region in which they are located. The guidelines for estimating θ_1 given earlier in this section may not be adequate to choose θ_1 for such areas. Further, unusual age-sex distributions as well as migration could influence r(t) severely in the case of some towns and villages. In such situations, the application of formula (2) with θ_1, s(t) and r(t) obtained for the region as a whole would not necessarily lead to convergence of $\theta(t)$ to θ_1.

CONCLUSION

The results presented above have two implications for family planning programmes. First, that as long as the time allowed to reach the demographic goal is not very short, the targets need not depend on the initial level of contraceptive prevalence. A common target acceptance rate given by equation (2), when applied to regions with vastly different initial contraceptive prevalence levels, would, within a few years, bring about near equality in the level of contraceptive prevalence. Hence national targets can be allocated to sub-regions in proportion to the number of couples of reproductive age provided that the sub-regions do not differ much in respect of mortality, fertility of non-contraceptors, method-mix, etc. Moreover, if the proportion of couples of reproductive age in the population does not vary much across sub-regions, the targets can be allocated in proportion to the size of the population. But if it is felt that some sub-regions differ considerably in respect of some of the key parameters (for example, metropolitan areas may have substantially different proportions married and age distribution, as compared to the general proportion), it would be necessary to set targets separately for these. Further, proportional allocations for very small regions like individual villages, small towns, or areas experiencing high migration.

The second implication is that reaching a high contraceptive prevalence level would not justify a drastic reduction in targets. Even when the desired prevalence level θ_1 is reached, the acceptance rate should equal $\theta_1(s_1+r_1)$ just to maintain this high level. If the goal is to reach replacement level, r_1 equal 0, and the acceptance rate would follow a trajectory $\theta_1(s(t)+r(t))$ asymptoting to $\theta_1 s_1$. Since the value of the growth rate r(t) is small as compared to the attrition rate s(t), the change in the acceptance rate over time would be mainly because of a change in s(t). Note that s(t) is dependent on the method-mix and the age distribution of users, and not strictly on the level of contraceptive prevalence. It is true that as the contraceptive prevalence level rises, the age-distribution of acceptors and consequently of users is likely to undergo some change. But such changes are generally very small and gradual. For example, statistics from the Indian programme reveal that the mean age at acceptance declined by only one year in the case of sterilisation acceptors and by two years in the case of IUD acceptors between 1973 and 1985, a period that saw a substantial rise in the contraceptive prevalence rate[7]. Therefore, major changes in s(t) can only be expected from large shifts in method preference. And, so long as these do not occur, the target acceptance rate would remain fairly steady and gradually stabilise at $\phi_1 s_1$. This is advantageous to programme administrators since demand for services would also not fluctuate much.

The acceptor schedule in equation (2) is not being advanced as a perfect substitute for an elaborate target setting exercise. Rather, it should be treated as a rule of thumb when other procedures are thought to be too laborious. A middle path would be to obtain targets for a country or a state based on one of the conventional procedures and then allocate these on a pro-rata basis to sub-regions. Variations in the initial contraceptive prevalence level can be ignored in such an allocation as long as the sub-regions ar not too dissimilar with respect to other demographic factors.

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COMMUNITY BASED DISTRIBUTION OF FAMILY PLANNING: SOME CORRELATES OF PERFORMANCE

DR. N.S.N. RAO *

INTRODUCTION

Strategies in family planning programmes all over the developing world are undergoing changes as per the needs. Countries which started their programmes purely as clinic-based ones have now realised that unless the programmes are taken to the community, they cannot make an appreciable impact. It has also been realised that strategies should be directed more towards emphasising the use of conventional contraceptives. In light of this, community based distribution of contraceptives, defined by the International Planned Parenthood Federation (IPPF) Special Panel[1], as non-clinical delivery of family planning services and supplies through the commercial network at subsidised prices or through community agents who are not primarily family planning workers but who serve the project/programme for a fee or on a volunteer basis, is gaining momentum all over the developing world.

Though community based distribution was considered a controversial experiment in the early part of the last decade, it is fast getting interwoven with national programmes and the work of international organisations like the IPPF. Community based distribution programmes are now being run efficiently in several countries like Brazil, Bangladesh, Columbia, Egypt, India, Indonesia, Korea, Mexico, Philippines, Sri Lanka, Tunisia, Taiwan, Trinidad etc.[21].

OBJECTIVES

Community based distribution programmes are influenced by a host of factors and in order to achieve the maximum output it is essential to delineate the factors that maximize output taking into account the interrelationships between these factors. As such, the present study is an attempt in this direction and was carried out in a community based distribution project in Varanasi district in Uttar Pradesh, India.

BACKGROUND

One of the pioneer voluntary organisations of India, the Family Planning Association of India (FPAI) and a renowned educational institution, Banaras Hindu University (BHU) launched a collaborative project in October 1979—

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the FPAI Varanasi Community Based Distribution Project—wherein the technical implementation came from BHU and financial assistance was provided by FPAI. The project was located in one of the most backward areas of the country and covered a population of 1.2 million spread over eight Community Development Blocks spanning 1242 villages in an area of 1465 km. The CBD approach adopted by the project is detailed below.

Contraceptives were distributed through specially trained volunteers or depot holders selected on the basis of certain general criteria such as social background, acceptability by the community, an assured income, willingness to work on the project, and certain minimum educational qualifications etc. essential for recruiting acceptors, providing contraceptive supplies and maintaining records, and following up acceptors for resupplies and side effects. Some of the depot holders distributed the oral pill only while others distributed both the pill and the condom. However, all of them were encouraged to motivate couples for other available contraceptive methods. The depot holders were given a comprehensive training by the project staff. In addition, continuous on-the-job training was provided and followed up with periodical refresher courses.

The organisational set-up of the project consisted of an Honorary Director assisted by a Project Coordinator and an Honorary Medical Consultant. Under this apex, there was a three-tier staffing system—project assistants, field supervisors, and field assistants. Each project assistant was a FPAI headquarters' staffer of specialised cadre, and looked after a particular component of the programme viz., field operations, education and training, evaluation and statistics, women's development etc.in a Community Development block. Six to seven field assistants were supervised by one supervisor in each block and were responsible for training the depot holders, maintenance of supplies, organisation of educational activities and ensuring record-keeping and returns from the field to the FPAI headquarters.

The depot holders kept stocks of the oral pill, condoms and Neo Sampoon foam tablets, and distributed the latter two to acceptors. However, potential pill users were first screened on the basis of a checklist printed on the back of the Oral Contraceptive Acceptor Card, and those found suitable were prescribed the pill by a doctor following an examination at one of the regular clinic sessions in the village. Pill acceptors were followed up by the depot holders for any side effects and for further supplies. IUD (Copper)T) insertions were also carried out by the medical personnel at the village level while sterilisation facilities were provided through the District Hospital and University Hospital on referral basis. In addition to contraceptives, the depot holders also distributed certain selected items of primary health care provided by the project. These items were carefully selected as per the demands and needs of the community.

Project performance was constantly monitored and the progress reviewed. A three-tier supervision and support system existed in the field. At the depot holder's level, acceptor cards (with information about registration, distribution of supplies, side effects and their management, for the pill and stock and supply records were maintained. These were closely supervised by the field assistants and the medical officers during their regular visits to the villages. Project activities were monitored through fortnightly detailed reports of field activities, case study reports as well as stock and supply records maintained by the field staff. (These included registers containing various demographic particulars of the households as well as of the family planning performance of each depot holder in their respective areas). Every acceptor was interviewed by the field assistant at regular intervals for any side effect, and for ensuring regular resupply and use of the contraceptive. Field supervisors and headquarters staff visiting the field also made random acceptor checks during their field visits.

Supervisor level meetings with headquarters staff were held fortnightly to review the difficulties encountered in the field such as problems of motivation, follow)up, supplies, organisation of educational and sterilisation camps, women's development and rural development activities etc. At the level of the field assistants, a meeting was held once a month to assess the previous month's performance. Any new guidelines evolved were communicated to the field assistants. The third level review was made by the project committee which met every three months to lay down policy guidelines for the project.

METHODOLOGY OF THE STUDY

As mentioned earlier, this study attempts to examine the factors (including their interrelationship), which influence community based distribution in a CBD project viz. the FPAI Varanasi CBD Project with a view to maximising programme output.

Selection of sample of depot holders

At the beginning of 1984 when the present study was undertaken, the Varanasi CBD Project had 695 depot holders who had served it for at least one year. They were stratified according to the field assistant's area of operation and a list prepared. By the simple random sampling procedure, a 50 per cent sample of depot holders was selected from each field assistant's list, to give a sample of 345 depot holders.

Conceptualisation of Varanasi CBD Project as a system

The entire project was considered as a system with eight sub-systems each comprising of a number of variables which were identified on the basis of the availability of precise data. The conceptualisation was done on the basis of the model provided by Parks and Adelman[3]. The system so envisaged is depicted in Figure 1.

Collection of performance data'

From the monthly statistical returns submitted by the field assistants, the number of new acceptors, drop outs and continuing acceptors for each method of contraception were transferred to the monitoring proforma. The couple protection months for both new and continuing acceptors for each contraceptive method for the year were derived from the consolidated data. Data on process variables, number of visits by the field staff and the distribution of various primary health care items were also collected from the monthly reports and transferred to the above proforma.

Profile of depot holders and field assistants

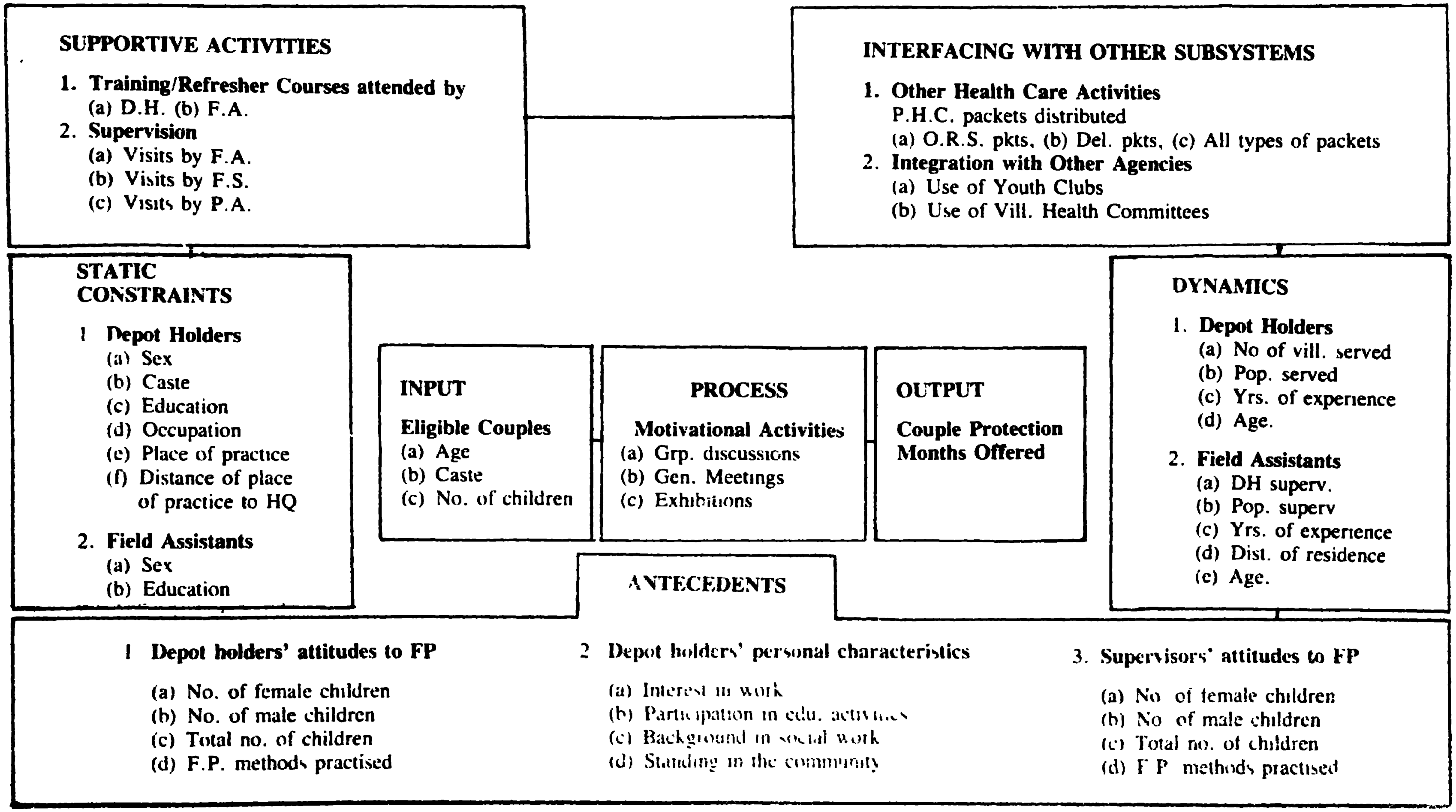
Information about the depot holders was collected by interviewing them with the help of a specially designed proforma which contained questions relating to their interest in their work, participation in educational as well as social work activities in the village, and the respect commanded by them in the community. It was scored on a four-point scale according to a subjective assessment of the field assistants who supervised them. Similarly, information about the field assistants was collected through a questionnaire which each filled up.

Analysis of the data

The analysis consisted of assessing the influence of various elements under different subsystem on the output, measured in terms of couple months of protection offered to acceptors adopting different methods of contraception. The output was measured separately for both new and continuing acceptors during the year as well as for all acceptors (i.e. total acceptors served during the year under study). Output performance was considered as a dependent variable and the subsystem elements as independent. All the variables are shown in Figure 1.

The statistical analysis involved logarithmic transformation of output data to make it amenable to standard statistical procedures, tabulation of means and standard deviations of the output parameters to understand the trends in relation to the categorisation of subsystem elements, one-way analysis of variance to sort out the significant influence of the subsystem elements on the output, and step-wise regression analysis to delineate the subsystem elements after eliminating interrelationships. The above statistical techniques were applied using the ICL 19045 computer. Suitable computer programmes were evolved for the analysis in terms of transformations, means, standard

FIGURE 1
Hypothetical visualisation of CBD programme as a system



deviations and analysis of variance. The programme developed by Moore[4] for partial and multiple correlation was suitably modified for the data analysis.

RESULTS AND DISCUSSION

On the basis of one-way analysis of variance, the significant influences of various elements in the different subsystems on the performance of the depot holders were as follows.

1. The total couple months of protection provided on an average by a depot holder were 219.9 months. Of these, 59.8 were for new acceptors recruited during the current year. The maximum contribution came from the oral pill and condom, justifying the community based distribution approach.
2. Amongst the elements in the process variables subsystem, group discussions, general meetings and exhibitions had a significant influence on the performance as regards the pill and condom.
3. In the supportive activities subsystem—
   a) The refresher courses for depot holders improved their motivational skills as assessed from performance, for all methods except the IUD.
   b) Increased field level supervision by the field assistants and field supervisors enhanced the performance of the depot holders in terms of new pill and condom users while the visits of the field supervisors helped increase the number of total acceptors served during the year for all methods.
4. In the dynamic variables subsystem—
   a) Depot holders who covered upto three villages were more likely to show improvements in recruiting new condom acceptors than those who catered to more than villages. However, he was ablerto perform well for all methods only if the total population covered was within 4000.
   b) Depot holders with greater experience in the project were more likely to recruit more new acceptors as well as serve more acceptors of all methods except the IUD than were those who had just a year of experience.
   c) Depot holders whose field assistants were staying within 5-6 kms. from them performed better in terms of recruiting new pill acceptors as well as for serving more acceptors of all methods.
   d) Depot holders who were supervised by field assistants with upto two years of experience performed better than those supervised by field assistants with over two years' experience.
5. In the static constraints subsystem
   a) Male depot holders performed better in terms of recruiting and serv-

ing pill and condom acceptors while female depot holders did better in the case of IUDs and sterilisations

b) Depot holders supervised by field assistants with post graduate qualifications were poorer performers as compared to those supervised by field assistants with lower qualifications.

6. The influence of the elements of the antecedent variables subsystem—The personality characteristics of the depot holders measured as interest of the depot holder, quantum of participation in educational activities, his interest in social work, and the respect commanded by him in the community influenced their performance.
7. Regarding the influence of the interfacing variables of the subsystem, it was observed that the integration of family planning activities with other primary health care activities influenced positively the performance of the depot holders as evidenced by the better performance of depot holders who had distributed a greater number of primary health care packets, especially those for oral rehydration and hygienic obstetric practice.

Some of the observations made in other studies on the CBD approach which corroborate the findings of the present study have been reproduced below.

The experience of Colombia[5], Sri Lanka[6], Egypt[7], Varanasi[8] and that of commercial Nirodh (condom) distribution in India[9] have amply emphasised that all channels of distribution - local volunteers, lay people or formal leaders of the community - can be utilised for proper contraceptive distribution in the CBD set-up. In fact, Isaacs[5] from his Columbian project experiences has stressed that the appointment of influential persons from the community as depot holders resulted in good performance.

The Columbian[5] and Bangladeshi[10] studies emphasise adequate supervision for better performance.

Ghosh[8] has observed that registered medical practitioners managed side effects better and retained more acceptors for follow up. Chowdhury[10] has also reported that efficient backup services to take care of the side effects of the pill improved the performance. He has also reported that initial declines in continuation rates for the pill were adequately compensated when medical supervision was provided. In his study in South Kanara in India, Pai[11] has also observed that the provision of medical backup improved the output of the programme.

The Bangladesh experience in Matlab Thana[10] has stressed the need for integrating family planning activities with other positive health measures while the Malaysian experience points to the role of total family development as a key to achievements in CBD programming[12]. FPAI's experience in Allahabad[13] has emphasised the linking of not only positive health care activities with CBD but also agricultural activities to get better results.

The benefits of involving community level groups have been amply highlighted by the experiences in Indonesia[14], Brazil[15], Philippines[16] and Malaysia[12].

The above experiences as well as the concepts of community based distribution suggest that the involvement of community agencies definitely yield better results.

Definition of the system on the basis of multiple correlation analysis

The combined influence of the 46 variables described under the various subsystems described in Figure 1 on performance was further analysed using regression analysis to sort out the interrelationships and to finally describe the system actually effecting the output. The overall system comprising of those elements actually influencing the output after eliminating the interrelationships for any of the methods is represented in Figure 2. The significant variables arrived at in the final stage along with their standardised regression coefficients and the quantum of variability in performance is expressed as R^2 and are presented in Table 1.

A discussion of the different variables influencing the output of each method follows.

System for non-clinical spacing methods

1. *Oral pill programme*

There were in all ten variables which were individually significant for new pill acceptors and another thirteen for the total acceptors served during the year. The multiple correlation analysis reduced them to six significant variables in the case of the oral pill; these were the number of refresher courses attended by the depot holder, sex of the field assistant, number of general meetings held, sex of the depot holder, number of visits made by the field assistant, and years of experience of the field assistant. The four variables which were observed to be significant in the case of total acceptors served were the number of oral rehydration packets distributed, size of population served by the depot holder, number of general meetings held, and years of experience of the depot holder. Thus, there were, in all, nine variables of significance for oral pill acceptors either new or served during the year.

For new pill acceptors, the six variables yielded a multiple regression coefficient (R) of 0.479 answering 22.9 per cent of the variation by the model while for the total acceptors served during the year, the four variables yielded a (R) value of 0.516 answering 26.6 per cent of the variation.

FIGURE 2

System influencing the output for CBD

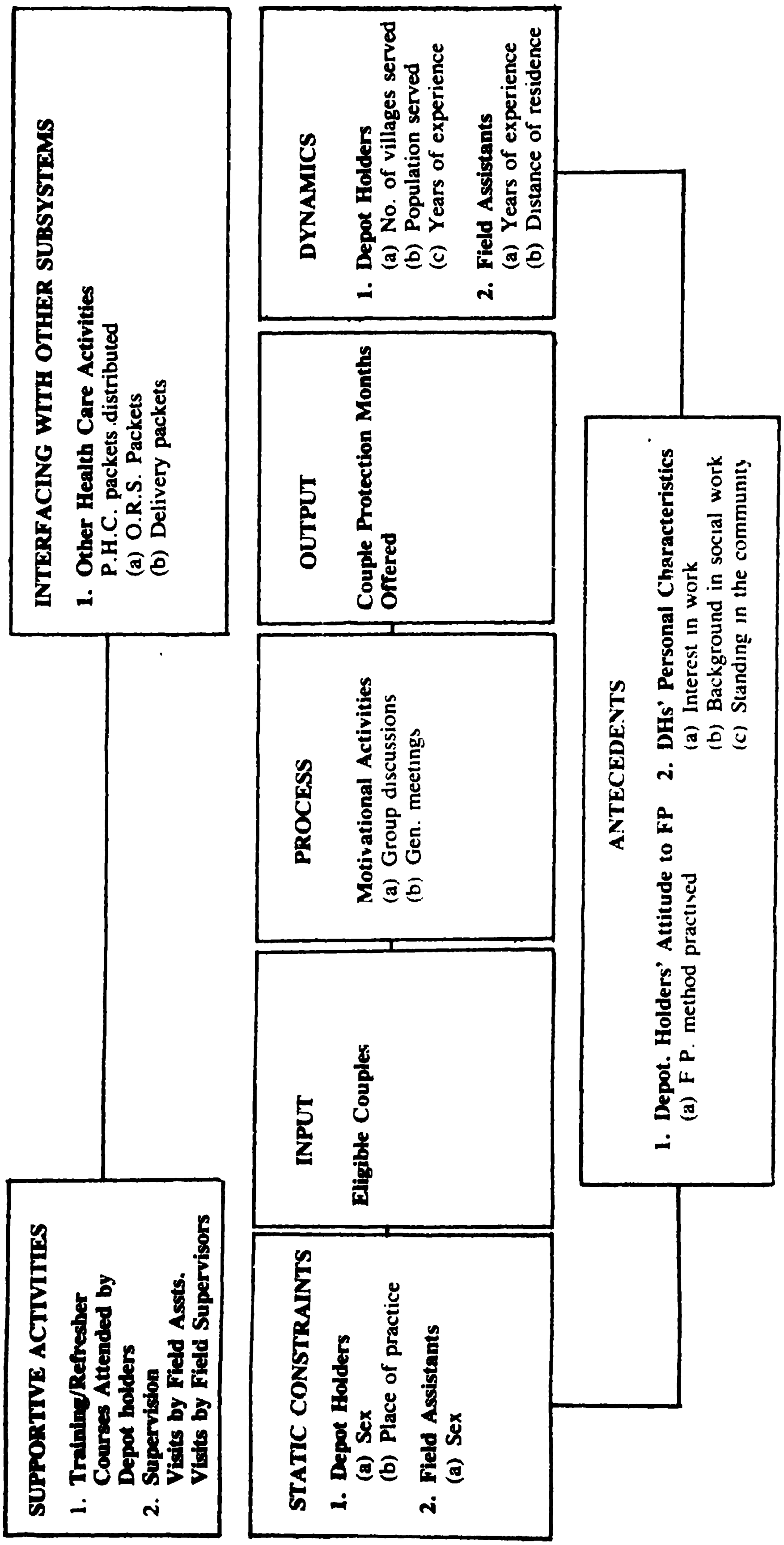


TABLE 1

Variables found significant and the standardised regression coefficient at the final stage of step-wise regression analysis

New acceptors recruited during the year							
Oral Pills		Condoms		IUD		Sterilisations	
Variables	Stand. B	Variables	Stand. B	Variables	Stand. B	Variables	Stand. B
Refresher courses to DH	+0.2354	Sex of DH	−0.2113	Visits by FS	+0.2020	PHC packets distributed	+0.2980
		Visits by F.A.	+0.2149				
Sex of FA	−0.2008	Group discns. held	+0.1587	Delivery packets distributed	+0.1385	FP method practised by DH	+0.1997
General meetings held	+0.1453	Refresher courses to DH	+0.1501	O.R.S. packets distributed	+0.1337		
Sex of DH	−0.1394						
Visits by FA	+0.1301	Interest of DH	+0.1421	Respect commanded by DH	+0.1174		
Experience of FA	−0.1153	Experience of FA	−0.1284				
R = 0.479, R^2 = 0.1229		R = 0 462, R^2 = 0.213		R = 0.448, R^2 = 0.201		R = 0.374, R^2 = 0.140	

Total acceptors served during the year					
Oral Pills		Condoms		Cu-T	
Variables	Stand. B	Variables	Stand. B	Variables	Stand. B
ORS packets distributed	+0.2211	Visits by FS	+0.2045	ORS packets distributed	+0.2491
Size of the population served by DH	+0.1971	Social work of DH	+0.1474		
		Place of practice of DH	+0.1439	Delivery packets distributed	+0.2058
		Dist. of F.A. residence	−0.1209		
General meetings held	+0.1733	Sex of DH	−0.1100	Visits by FS	+0.2051
		Interest of DH	+0.1100	Sex of DH	+0.1879
Experience of FA	−0.1108	Group discussions held	+0.1091	Experience of FA	+0.0991
R = 0.516, R^2 = 0.266		R = 0.476; R^2 = 0.227		R = 0.566, R^2 = 0.320	

DH = Depot Holder: FA = Field Assistant; FS = Field Supervisor.

2. *Condom programme*

Fifteen variables individually influenced the output of new condom acceptors while 19 affected the total number of acceptors served during the year. They were reduced to six variables viz. sex of depot holder, number of visits by the field assistant, number of group discussions, number of refresher courses attended by the depot holder, interest in work shown by the depot holder, and years of experience of the field assistant in the case of the former, and to seven viz., number of visits by the field supervisor, social work participation by the depot holder, place of practice of the depot holder, distance of headquarters of the field assistant from his place of residence, sex of the depot holder, the depot holder's interest in work, and number of group discussions held. Ten variables were ultimately found to be responsible for the output in condom acceptors either added or served during the year.

The multiple correlation coefficient for these variables found significant for new condom acceptors was 0.462 with 21.3 per cent of the variability being explained; the corresponding values for the total number of condom acceptors served during the year were 0.476 and 22.7 per cent respectively.

System for clinical methods

Among clinical methods, the depot holders promoted the IUD (CuT) and sterilisation, both male and female. Motivated cases were referred to appropriate agencies.

1. *IUD programme*

There were in all eight variables of different subsystems which were responsible for the output of new IUD acceptors recruited during the year and twelve for total acceptors continuing during the year with eight variables common to both. These reduced respectively to four and five variables viz., number of visits by the field supervisor, number of delivery packets distributed, number of oral rehydration packets distributed, respect commanded by the depot holder for acceptors added during the year; and number of oral rehydration packets distributed, number of delivery of packets distributed, number of visits made by the field supervisor, sex of the depot holder, and years of experience of the field assistant for the acceptors continuing during the year.

· The analysis yielded a multiple regression coefficient of 0.448 for new IUD acceptors added during the year and 0.566 for total IUD acceptors continuing during the year. They contributed to 20.1 per cent and 32.0 per cent of the variations in the system respectively.

2. *Sterilisation programme*

Fifteen variables affected the recruitment of sterilisation acceptors during the year. Of them, only three variables viz. number of primary health care packets distributed, family planning method practiced by depot holder, and number of villages served by field assistants were observed to be significant on multiple correlation analysis, yielding a multiple correlation coefficient of 0.374 answering only 14.0 per cent of the variation.

CONCLUSION

It can be observed that the above defined system answered nearly 30 per cent of the variability in the output parameters which is considered satisfactory in sociological investigations[6]. But it also indicates that there are various other subsystems or elements which have not been taken into consideration in the present analysis due to limitations of time, manpower and expertise on the CBD programmes. However, from the results of the study it can be concluded that an optimum output would be achieved in the CBD system if it takes into account the following:

The system should give due emphasis to supportive activities like organising periodical refresher courses for depot holders with an emphasis on case motivation and follow-up with adequate supervision by duly qualified staff. Process variables like general meetings and group discussions should form core motivational methods. Due consideration should be given to dynamic variables such as the size of the population to be covered by a depot holder which should be around 4000, and the proximity of supervisory staff from depot holders; this should be changed once in 2-3 years to avoid routinism. Static variables such as the sex of the depot holder or field assistant definitely influence performance in relation to the method applicable to the particular sex. The selection of the depot holder should be done with due emphasis on his interest in the job, social work background and standing in the community irrespective of his age, caste or educational qualifications etc. The integration of family planning activities with other primary health care programmes especially those related to the mother and child like provision of oral rehydration salts during diarrhoea or delivery packets improves family planning output. It is also beneficial to involve community agencies like youth clubs or village health committees in the system. Finally, it may be noted that the elements of the various subsystems which relate to the providers of the service are more important than those related to the input (i.e. eligible couples) in effecting optimum output.

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BIRTH ORDER AND ACADEMIC ACHIEVEMENT OF XHOSA CHILDREN FROM BROKEN AND INTACT FAMILIES

PROF. VARGHESE I. CHERIAN *

INTRODUCTION

The relationship between birth order and academic achievement of school children has been widely researched throughout most parts of the world[1,2]. Comparatively more research has been carried out in Western countries than in developing countries, especially in Africa. Moreover, studies on the relationship between birth order and academic achievement have not resulted in findings that are entirely consistent from study to study, Hence it seems reasonable that the relationship between birth order and academic achievement should be investigated.

The significance of birth order is reasonably well established although the interpretation of the facts is neither easy nor certain. In his nineteenth century studies of eminent scientists, Galton[3] found that it was an advantage to be an eldest son. Subsequent research in the general population in England and America amply confirmed this judgement[4].

The importance of birth order as a factor in the academic performance of school children lies in the fact that children's experiences are influenced by their ordinal position in the family, that is, by whether they are the eldest or youngest or intermediate. Lynn[5] and Musgrove[6] report that the eldest and the youngest are better achievers than the intermediate children. Douglas[7] found the eldest children both in the middle and working class families to be higher achievers than the intermediates; he is of the view that the eldest or youngest children have an advantage in that they get a lot of stimulation from their parents by virtue of their close contact with them.

The effect of birth order on academic achievement was spurred by both the pschoanalytic conception of the unusual role of the first-born and by observation of the over-representation of the first-born among the eminent[8,9]. Social scientists have shown a longstanding interest in the possible influences of ordinal position of siblings on the behaviour and development of children[10].

Research on the effect of birth order has examined the influence of birth order on personality[11] as well as cognitive outcomes[12]. Rosenberg and Sutton-Smith[13] found that first-borns exceeded second-borns on measures of

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cognitive ability. As birth order position becomes greater, the level of ability declines,[14,15] and the decline in the level of ability can adversely affect the academic achievement of children.

Studies of children's school grades have indicated that first-born children receive higher grades than later-born children[16-20].

Eysenck and Cookson[21] argue that the first-born surpass intermediates because of the greater attention given to the former by their parents. The emotional satisfaction and psychological security of such children is also said to be enhanced because of close contact with their parents. The youngest child is also said to enjoy similar advantages. In keeping with this proposition Davie et al[22], Nuttall[23], King and Lillard[2] and Cherian[24] have reported a statistically significant relationship between birth order of school children and their academic achievement. However, there have been a few studies that have found either no, slim or weak relationship between the two variables[25-27]

Of the population of Transkei which covers an area of 41,620 square kilometers, 95 per cent of the Xhosa-speaking people, a sub-group of the Cape Nguni, the southernmost representatives of the Bantu-speaking peoples of Africa, who are made up of several major ethnic groups notably the Xhosa, Tembu, Mpondo, Mpondomise, Xesibe, Bomvana, Fingo, and Ntlangwini[28]. The population of Transkei was 3.6 million in 1985[29].

Sixty per cent of the adult population in Transkei is illiterate and of all school leavers, 20 per cent leave semi-literate and 55 per cent literate[30]. In 1985, Transkei had an enrolment of 1,122,433 pupils in the age range of 6 to 19 years which includes 406,120 boys and 415,159 girls in the age range of 6 to 14 years, 132,396 boys and 168,758 girls in the age range of 15 to 19 years. The increase in secondary school enrolment is taking place much faster than in the other phases and it can even be stated that there is a pupil explosion in the secondary school phase in Transkei.

Transkei shares with other developing countries the difficulty of obtaining reliable data on births, deaths, fertility and infant mortality[31]. The total number of births from March to February in 1984 and 1989 were 113,237 and 116,373. The average population growth rate between 1985 and 1989 was 3 per cent[32]. The number of families experiencing the adverse effects of divorce in Transkei (reported to be 4,015 for the period 1976 to 1979) tends to increase every year[31].

OBJECTIVES

The purpose of the study was to examine whether or not the academic achievement of Xhosa children from broken and intact families is related to their birth order in a social and political context where population growth, divorces and separation are on the increase.

SAMPLE & METHODOLOGY

The sample chosen for the study included urban and rural Transkein school children in order to have a fairly wide variation in birth order. A random sample was utilised consisting of 369 boys and 652 girls in the age range of 13 to 17 years with a mean age of 15.6 selected from 14,765 boys and 26,109 girls who represented the total Standard 7 population of Transkei in 1984. The sample included 242 children whose parents were divorced or separated and 713 children whose parents were neither divorced nor separated.

Research Instruments

The instruments used to identify the children whose parents were divorced or separated and neither divorced nor separated and to provide an objective estimate of the birth order of the children were a student questionnaire and a parent questionnaire.

In developed countries particularly in the United States of America, there are specially designed Standardised achievement tests to measure pupils' academic performance. Such tests do not exist *per se* in Transkei. The closest measure of academic achievement is the fairly objective national examination administered to all students at the completion of Standard 7. The written examination in each subject area comprises multiple choice, short-answer, and or essay type questions appropriately designed by the internal subject specialists and moderated by external subject specialists. For these reasons this comprehensive examination was adopted as a measure of academic performance.

The marks obtained by the pupils at the Standard 7 examination conducted by the Department of Education of the Government of Transkei in 1984 in seven of the following subjects were aggregated as the criterion measure: Xhosa, English, Mathematics, General Science, History, Geography and Agricultural Science. The maximum marks for the Xhosa examination was 400 and that of each of the other six subjects was 300.

Procedure

The parents' and students' questionnaires were administered to 1021 Standard 7 pupils and their parents. The questions addressed to the parents were on the total number of their children and the date of birth of all children including the Standard 7 child in the ascending order of their birth; those addressed to the children were on their name, date of birth and birth order. When the birth order given by the child was found to be different from that given by the parent the correct birth order was confirmed by an interview with the parent.

Children were grouped into eight categories in the ascending order of their birth order. Categories 1 to 7 included children belonging to birth orders 1 to 7, and category 8 included children belonging to birth order 8 and above.

In this study socio-economic status was obtained by adding the points awarded to the educational, occupational and income levels of each of the parents of the child. Hardly ever been to school, Sub A to Standard 2, Standard 3 to 5, Standard 6 to 8, Standard 9 to 10, Post Secondary Diploma and University Degree level of education were awarded points 1, 2, 3, 4, 5, 6 and 7 respectively. Parental income was obtained by dividing the total family income from all sources by the total number of members of the family who shared the income and it was rated on a seven point scale. Points were awarded in ascending order from the lowest income level of 1 to the highest level of 7. Unskilled manual, semiskilled manual, foreman manual, routine clerical, supervisory, white collar, managerial and executive, professional and high administrative occupational levels were awarded points 1, 2, 3, 4, 5, 6, 7 and

TABLE 1

Mean parental education, income, occupation, socio-economic status and standard deviations for low, middle and high status subjects

Variable	Family status	SE Level	Sex	Mean	S.D.	
Parental education	Intact	Low	Boys	3.24	1.09	21
			Girls	3.00	0.72	67
		Middle	Boys	7.23	.50	137
			Girls	6.16	.56	288
		High	Boys	9.91	.11	46
			Girls	9.62	.59	154
	Broken	Low	Boys	4.00	0.00	9
			Girls	3.43	.38	30
		Middle	Boys	6.31	.66	54
			Girls	5.50	.29	105
		High	Boys	9.50	.06	22
			Girls	8.59	0.91	22
Parental occupation	Intact	Low	Boys	2.95	0.22	21
			Girls	2.48	0.82	67
		Middle	Boys	7.14	1.13	137
			Girls	6.32	1.75	288
		High	Boys	11.28	2.21	46
			Girls	12.64	2.80	154
	Broken	Low	Boys	4.00	0.00	9
			Girls	2.43	0.86	30
		Middle	Boys	6.35	1.12	54
			Girls	5.61	1.43	105
		High	Boys	10.68	0.89	22
			Girls	12.36	2.01	22

TABLE 1 *(Contd.)*

Variable	Family status	SE Level	Sex	Mean	S.D.	n
Parental income	Intact	Low	Boys	1.95	0.22	21
			Girls	2.42	1.14	67
		Middle	Boys	6.64	0.93	137
			Girls	6.19	1.47	288
		High	Boys	7.37	1.44	46
			Girls	7.35	1.48	154
	Broken	Low	Boys	4.00	0.00	9
			Girls	2.24	0.58	29
		Middle	Boys	6.33	1.26	54
			Girls	6.09	1.08	105
		High	Boys	7.32	1.49	22
			Girls	6.95	0.21	22
Socio-economic status	Intact	Low	Boys	8.14	0.65	21
			Girls	7.90	1.88	67
		Middle	Boys	21.01	3.23	137
			Girls	18.67	2.74	288
		High	Boys	28.57	3.21	46
			Girls	29.60	2.65	154
	Broken	Low	Boys	12.00	0.00	9
			Girls	8.03	0.32	30
		Middle	Boys	19.00	3.41	54
			Girls	17.20	3.16	105
		High	Boys	27.50	1.85	22
			Girls	27.91	1.85	22

8 respectively to obtain a measure of the occupational status of parents. Parental education, occupation and income scores were aggregated as the socio-economic status measure which was categorised into low, middle and high socio-economic status to represent the full range meaningful for this group. One may see in Table 1 that there were 30 boys and 97 girls from low, 191 boys and 393 girls from middle, and 68 boys and 176 girls from high socio-economic status. More girls than boys were in school.

RESULTS

In the first analysis as shown in Table 1 the socio-economic status of the parents and the sex of the children from broken and intact homes were controlled.

The first group consisted of boys and girls of low socio-economic status (SES) from broken homes. The inadequate small size of the broken home low SES boys group did not warrant any statistical analysis. The academic achievement of low SES girls from broken homes decreased as their birth order increased, which was confirmed by analysis of variance as significant, F (4, 25) = 20.35, MSE = 2105.67, $p < .01$. The academic achievement of low SES boys from intact homes decreased as their birth order increased, which was confirmed by analysis of variance as significant, F (1, 19) = 3672.22, MSE = 55.77, $p < .01$. A similar relationship was found for low SES girls, F (3, 63) = 28.48, MSE = 1985.9, $p < .01$.

The second group included boys and girls of middle SES parents. The academic achievement of boys from middle SES broken and intact families decreased as their birth order increased, which was confirmed by analysis of variance as significant, F (4, 49) = 3757.21, MSE = 64.51, $p < .01$. A similar relationship was found for girls, F (5,99) = 54.93, MSE = 2151.7, $p < .01$.

The third group included boys and girls of high SES parents from broken and intact families. The academic achievement of boys decreased as their birth order increased, which was confirmed by analysis of variance as significant, F (2, 19) = 200.6, MSE = 246.85, $p < .01$; F (2, 43) = 5.82, MSE = 8439.64, $p < .01$. A similar relationship was found for high SES girls, F (2, 19) = 2728.71, MSE = 21.11, $p < .01$; F (4, 149) = 39.98, MSE = 8408.27, $p < .01$. Further, in Table 2, paritywise analysis shows that the parity 1 mean scores (M) of 747.5 and 814.89 are lower than their respective SES sub group mean scores (m) of 767.6 and 897.75. These mean scores (M and m) indicate the lower performance of the two groups of 10 per cent (17 out of 157) of all the parity 1 children whereas the remaining parity 1 mean scores of 1066.67, 1089.52, 1333.00, 1320.46 and 1254.72 which are higher than their respective SES sub group mean scores of 1047.08, 968.73, 1086.18, 1256.22 and 1201.14 indicate the higher performance of the five groups of 89.2 per cent (140 out of 157) of parity 1 children.

At parity 2, the mean score of 1249.77 which is lower than the SES sub group mean score of 1256.22 indicates the lower performance of one group of 14.5 per cent (22 out of 152) of all the parity 2 children whereas the remaining parity 2 mean scores of 1091, 1226.33, 1149.09, 1118.29, 1240.00 and 1229.82 which are higher than their respective SES sub group mean of 649.33, 959.42, 1047. 08, 968.73, 1177.68 and 1201.14 indicate the higher performance of the six groups of 84.5 per cent (130 out of 152) of parity 2 children.

At parity 3,the mean scores of 1140.27, 1193.18, and 1036.00 which are lower than their respective SES sub group mean scores of 1177.68, 1256.22 and 1201.14 indicate the lower performance of 16 per cent (23 out of 142) of all the parity 3 children whereas the mean scores of 731.29, 1121.82, 1141.00, 1098.25, 985.40 and 1131.56 which are higher than their respective SES sub group mean scores of 718.31, 959.42, 897.75, 1047.08, 968.73 and 1086.18

TABLE 2

Birth orders, mean achievement scores and standard deviations of pupils by socio-economic status, family status and gender controlled

Socio-economic	Family status	Gender of child	Birth order	n	Academic achievement		m
					Mean	S.D	
Low	Broken	Boys	5	9	892.00	2.12	892.00
		Girls	1	8	747.50	22.49	767.60
			3	1	1138.00	–	
			4	11	764.09	70.03	
			6	9	732.89	2.85	
			7	1	909.00	–	
	Intact	Boys	2	1	1091.00	–	649.33
			4	20	627.25	7.47	
		Girls	3	21	731.29	69.94	718.31
			5	2	828.50	6.36	
			6	35	735.34	28.30	
			7	9	597.33	1.66	
Middle	Broken	Boys	2	3	1226.33	17.90	959.42
			3	11	1121.82	8.70	
			4	19	930.74	8.12	
			5	10	747.40	2.46	
			6	11	966.55	7.22	
		Girls	1	9	814.89	3.10	897.75
			3	2	1141.00	4.24	
			4	21	978.52	7.94	
			5	38	825.37	72.31	
			6	17	963.00	27.62	
			7	18	909.11	18.75	
	Intact	Boys	1	27	1066.67	66.58	1047.08
			2	32	1149.09	94.10	
			3	28	1098.25	20.87	
			4	11	962.55	4.91	
			5	17	795.94	15.77	
			6	8	930.13	3.60	
			8	14	1053.29	30.69	
		Girls	1	23	1089.52	205.94	968.73
			2	34	1118.29	80.37	
			3	47	985.40	58.97	
			4	66	913.47	119.56	
			5	81	894.74	48.79	
			6	21	953.90	3.70	
			7	16	1050.19	24.97	

TABLE 2 *(Contd)*

Socio-economic	Family status	Gender of child	Birth order	n	Academic achievement Mean	S.D	m
High	Broken	Boys	2	10	1240.00	19.01	1177.68
			3	11	1140.27	11.98	
			6	1	966.00		
		Girls	1	1	1333.00		1086.18
			3	9	1131.56	4.00	
			6	12	1031.58	4.98	
	Intact	Boys	1	13	1320.46	114.22	1256.22
			2	22	1249.77	21.07	
			3	11	1193.18	11.13	
		Girls	1	76	1254.72	75.83	201.14
			2	50	1229.82	124.33	
			3	1	1036.00	–	
			4	1	1043.00		
			6	26	1001.81	50.65	

indicate the higher performance of 84 per cent (119 out of 142)of the remaining six groups of parity 3 children.

At parity 4, the mean scores of 764.09, 627.25, 930.74, 962.55 and 913.47 which are lower than their respective SES sub group mean scores of 767.60, 649.33, 959.42, 1047.08 and 968.73 indicate the lower performance of 85.8 per cent (127 out of 148) of five groups of parity 4 children whereas the mean score of 978.52 which is higher than the SES sub group mean score of 897.75 indicates the higher performance of 14.2 per cent (21 out of 148) of the remaining group of parity 4 children.

At parity 5, the mean scores of 747.40, 825.37, 795.94 and 894.74 which are lower than their respective SES sub group mean scores of 959.42, 897.75, 1047.08 and 968.73 indicate the higher performance of 93 per cent (146 out of 157) of four groups of parity 5 children whereas the mean scores of 892.00 and 828.50 which are equal to and higher than their respective SES sub group mean scores of 892.00 and 718.31 indicate the average and higher performance of 7 per cent (11 out 157) of the remaining two groups of parity 5 children.

At parity 6, the mean scores of 732.89, 930.13, 953.90, 966.00, 1031.58 and 1001.81 which are lower than their respective SES sub group mean scores of 767.60, 1047.08, 968.73, 1177.68, 1086.18 and 1201.14 indicate the lower performance of 48.6 per cent (68 out of 140) of six groups of parity 6 children whereas the mean scores of 735.34, 966.55 and 963.00 which are higher than their respective SES sub group mean scores of 718.31, 959.42 and 897.75 indicate the higher performance of 51.4 per cent (72 out of 140) of three groups of parity 6 children.

At parity 7, the mean score of 597.33 which is lower than the SES sub group mean score of 718.31 indicates the lower performance of a group of 20.4 per cent (9 out of 44) of parity 6 children whereas the mean scores of 909.00, 909.11 and 1050.19 which are higher than their respective SES sub group mean scores of 767.60, 897.75 and 968.73 indicate the higher performance of the remaining three groups of 79.6 per cent (35 out of 44) of parity 7 children.

At parity 8, the mean academic achievement score of 1053.29 which is higher than the SES sub group mean score of 1047.08 indicates the higher performance of 100 per cent (14 out of 14) of parity 8 children. Thus, the academic achievement of early parity children tended to be the best, and the academic achievement of children of late parity tended to be better than that of those of middle parity. Among children belonging to high SES intact and broken families at parities 1 and 3, the mean academic achievement differences of 218.72 and 201.44 between the girls' mean achievement scores of 1254.72, 1036.00 and 1333.00, 1131.56 were higher than those of 127.28 and 99.73 between the boys mean achievement scores of 1320.46, 1193.18 and 1240.00 and 1140.27 respectively. This indicates that the academic achievement of girls tended to be more adversely affected by birth order than that of the boys. Table 2 indicates a consistently negative relationship between the two variables at the high SES level whereas at middle and low SES levels such a consistently negative relationship was not found to exist. For example, among low SES girls from intact families the mean academic achievement score of 731.29 at parity 3 was lower than that of the mean achievement score of 735.34 at parity 6.

DISCUSSION

The finding of the present investigation is that there is a consistently negative relationship between birth order and academic achievement of children in intact and broken homes at high SES level whereas among low SES boys in intact families, low SES girls and middle SES boys and girls in broken and intact families, the performance of early parity children tended to be the best, and the performance of late parity children tended to be better than that of middle parity children. The academic achievement of girls tended to be more adversely affected by birth order than that of the boys. It is possible that in a small family, early parity children are in closer contact with their parents and habitually use more grown up language and ideas compared with children in a large family of many siblings. Early parity children, from their earliest years, are subjected to a great deal of stimulation by adults, which their later born brothers and sisters may not derive.

Compared to middle parity children, late parity children could also enjoy closer parental attention and educational advantages besides the stimulus f having older children to play with. Moreover, they could reap the benefits f the lessons learnt by the early and middle parity children. This could pave he way to the highest achievement of early parity children and the higher chievement of late parity children compared to the disadvantaged middle parity hildren. The inconsistent negative relationship at middle and low SES levels nd the more adversely affected academic achievement of girls than boys at he high SES level could be due to variations in a number of other factors uch as parental attitude towards education, emotional climate of the home, ress for academic achievement which were not controlled in this investigaion. Further, when the sample was broken by socio-economic status, the samle size was not sufficient at some parities to warrant any meaningful statistical nalysis. For example, there were no boys at parities 1 to 4 among low SES oys. Hence an investigation adhering to stratified random sampling including n adequate number of boys and girls and at the same time encompassing ther variables that affect the academic achievement of children is suggested. he findings of this investigation indicate the need for planned parenthood n the Transkeian context

SUMMARY

This study investigated the relationship between birth order and academic chievement of 242 pupils whose parents were divorced or separated and 713 upils whose parents were neither divorced nor separated. The subjects were n the age range of 13-17 years with a mean age of 15.6 years and they were hosen at random from the Standard 7 population of Transkei, South Africa. wo questionnaires, one for the pupils and the other for their parents, were dministered to collect information on the birth order of children. Analysis f variance indicated a significant negative relationship between birth order nd the children's academic achievement.

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WEANING AND INFANT CARE PRACTICES IN AN URBAN AREA

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INTRODUCTION

Weaning is a crucial time in a child's life marked by a gradual shift from exclusive breastfeeding to the adult diet. This transitional period begins around the fourth month and may extend up to two or even three years of age, since breast milk is insufficient to sustain growth beyond this period[1]. Weaning and infant care practices are likely to change with changes in attitude and knowledge. In fact, during the last two to three decades, economic improvement and education of women which exposes them to new ideas, have brought about changes in weaning practices.

OBJECTIVES

Prolonged breastfeeding without any weaning foods, poor environmental conditions and socio-economic deprivation are the main factors which are responsible for high levels of undernutrition and morbidity in early childhood. A study of existing weaning practices in different segments of the population and their impact on infant growth and morbidity thus is an essential prerequisite for introducing appropriate interventions relating to weaning. The main objective of the present study then was to assess the current weaning and infant care practices observed by urban families in Vijayawada in Andhra Pradesh.

SAMPLE & METHODOLOGY

A total sample of 100 mothers with infants aged 6-24 months were selected randomly form an urban community in Vijayawada in the state of Andhra Pradesh. The mothers were interviewed in their homes to collect information about income, occupation, education, age and sex of the infant, and weaning and infant care practices as assessed by the practices adopted for keeping the infant/child clean. The height, weight, mid upper arm circumference and head circumference of the infant were measured using Freeman's tape, a beam balance, and a flexible fibre glass tape respectively.

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The results were analysed using statistical tests i.e. Z and X^2 tests. Gomez's classification for weight for age and Waterlow's classification for height for age, mid upper arm circumference and head circumference ratios were taken to assess the nutritional status of infants.

RESULTS AND DISCUSSION

Socio-economic profile

About 71 per cent of the mothers were Hindu and 64 per cent lived in nuclear families with low (36 per cent) and middle income (34 per cent). Over half (55 per cent) of the wives and 71 per cent of their husbands were literate; among them, 45 per cent of the wives and 39 per cent of the husbands had received college or university level education. In almost all the families, the men were the major earning members, and as many as 91 per cent of the wives were wholly occupied in looking after the house.

Breastfeeding practices

As in all developing countries, breastfeeding has been the universal practice in India[2,3]. In the present study, over three-fifths (61 per cent) of the mothers from the low income group continued breastfeeding beyond one year as compared to those in the middle (50 per cent) and high income groups (13 per cent). Similarly, when education was considered, mothers who were illiterate (62 per cent) continued breastfeeding beyond one year while college-educated mothers discontinued breastfeeding before the infant was a year old.

Failure of lactation was the main reason for discontinuation of breastfeeding in the case of mothers from the low income group as also those who were illiterate. Mothers from the high income group and those with college education expressed the need for introducing supplementary foods and increased nutrient requirements after six months of age of the infant. Thus, though all mothers breastfed their infants, there was a variation in the duration of breastfeeding with income and educational level.

Artificial milk feeding

Since mothers in the high income group and those with college education introduced supplementary foods early in the life of the infant, the proportion of infants receiving top milk was observed to be high among these groups. The reasons advanced by most mothers for giving artificial milk were inadequacy of breast milk or lack of breast milk.

Buffalo milk was most widely used as a milk supplement (by 73 per cent of the mothers) in this area. However, about a sixth (16 per cent) of the mothers fed their infants with commercial milk formulae; the remaining used both commercial and animal milk. The milk was diluted prior to feeding as this was believed to increase its digestibility. Decreased dilution was observed as the age of the infant increased. Mothers form the low income group and illiterate mothers used more water to increase the quantity of milk (1 part milk and 2 parts of water) than others, a finding which has also been reported by Raghir and Bakaya[4].

Age of introduction of supplements

Table 1 presents a distribution of the infants by age of introduction of supplements and mother's education and income levels.

TABLE 1

Age of introduction of supplements in relation to family's income level and education of mother

Group	Age of infant in months			Total (N =
	6	7-12	12	
Income				
Low	32(88.9)	4(11.1)	–	36
Middle	31(91.2)	2(5.9)	1(2.9)	34
High	25(83.4)	4(13.2)	1(3.3)	30
Education				
Illiterate	41(91.9)	3(6.7)	1(2.2)	45
School-educated	28(93.3)	2(6.7)	–	30
College-educated	19(76.0)	5(20.0)	1(4.0)	25

Figures in brackets denote percentages

The majority (88 per cent) of the mothers started supplementary foods by six months after performing certain religious ceremonies. The remaining (12 per cent) did so when the infant was between 7-12 months of age, the main reason for the delay being a delay in performing the religious ceremony (called *annaprasan*). However, 17 per cent of the mothers, mainly thsoe from the low income and illiterate groups, discontinued the supplements thereafter and reintroduced them after a few months. The reasons given by these mothers was the infant's aversion to foods other than milk (47 per cent), lack of knowledge about the importance of supplementary foods (29 per cent), and problems of digestion and absorption (24 per cent). Introduction of supplementary foods between the age of 4-6 months has also been reported by other workers[5,6].

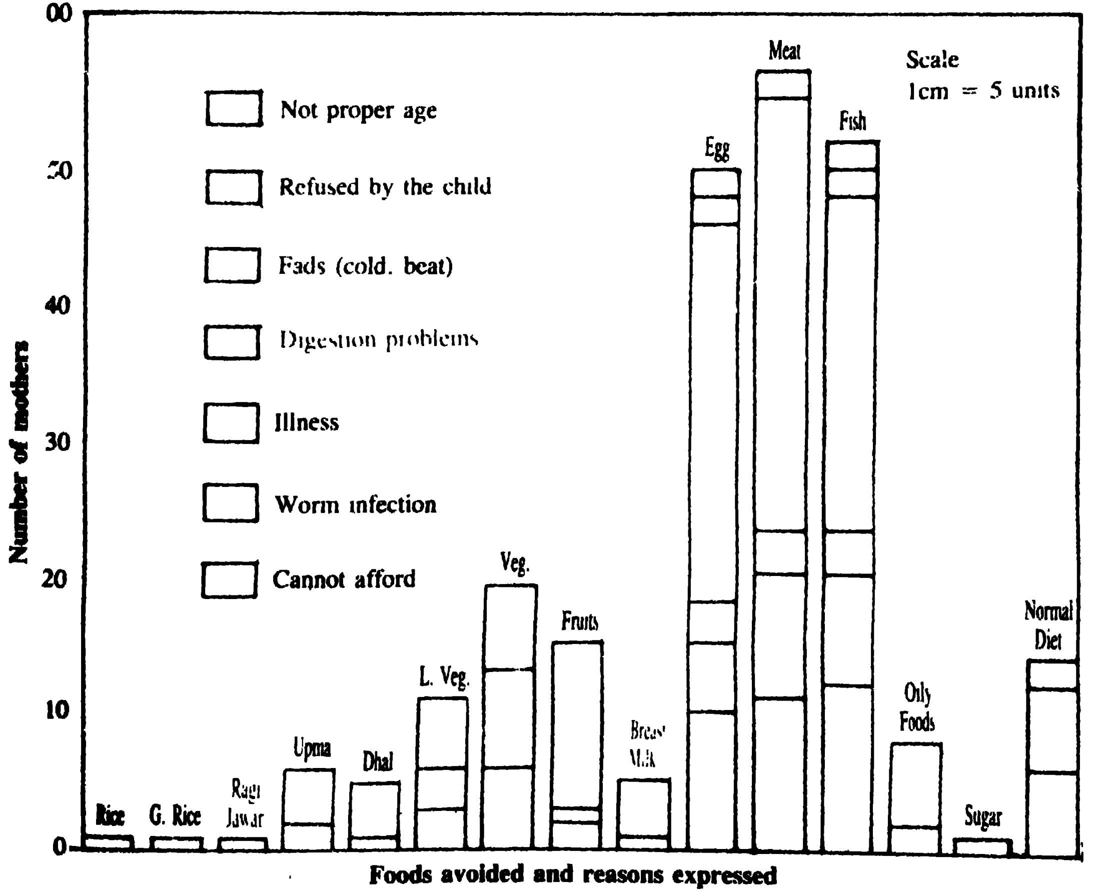
Nature of supplementary foods

Most high income group infants enjoyed a variety of weaning foods. College-educated and high income group mothers started weaning with fruit juices (76 per cent and 57 per cent respectively) and gradually introduced semi-solid and solid foods, whereas illiterate and school-educated and low and middle income group mothers by and large started weaning directly with cereal foods. This difference was statistically significant. It was apparent that high income (95 per cent) and college-educated mothers (96 per cent) relied more on ready-made foods while low income group(84 per cent) and illiterate mothers (85 per cent) preferred homemade preparations.

Rice and pulses were found to be common supplementary foods among all mothers. Feeding of nutritious foods (dal, vegetable, leafy vegetables, fruits) was found to increase with increasing income and educational levels. A considerably greater proportion of low income and illiterate mothers favoured rice with *rasam* to feed their infants. Similar observations have been made by Dodda and Datta[7]. Most of the mothers irrespective of educational level, avoided giving eggs, meat, fish and roots and tubers to infants as they were considered to cause digestion problems. Some of the mothers categorised fruit juices and butter milk as 'cold' foods and therefore unsuitable for the infant (Figure 1).

Sixty eight per cent of college-educated and 60 per cent of high income group mothers fed their infants with soft food devoid of seasoning. Among the rest, while the majority of low income mothers and 66.7 per cent of those who were illiterate fed them with the same food that was cooked for the family,

FIGURE 1



half of the middle income and school-educated mothers kept some food aside for the infant prior to seasoning it. A high percentage (85 per cent) of the mothers reported that they tried to feed a new food again after a few days, if the infant refused to eat it at the first attempt.

A considerable percentage of high income and college-educated mothers relied on books and doctors for knowledge about infant weaning practices as has been reported by other workers[7]. Family elders like mothers and mothers-in-law provided such information to less than a tenth (9 per cent) of mothers.

Significant differences were observed in the weaning practices followed by low and high income group mothers and also between those from middle and high income groups (Table 2).

TABLE 2

Differences in weaning practices by family income and mother's education

Group	S.D.	Z value
Income		
Low income	29.7 + 4.98	0.24
Middle income	29.3 + 7.8	(NS)
Low income	29.7 + 5.05	3.13*
High income	33.6 + 7.8	
Middle income	29.3 + 7.8	2.62*
High income	33.6 + 7.8	
Education		
Illiterate	29.3 + 6.5	0.038
School-educated	29.2 + 6.77	(NS)
Illiterate	29.3 + 6.51	4.39*
College-educated	34.5 + 3.5	
School-educated	29.2 + 6.77	3.74*
College-educated	34.5 + 3.5	

NS = Not significant. * Significant 0.05 level.

When the mother's educational level was considered, no significant difference was observed between the weaning practices followed by illiterate and school-educated mothers. however, there was a significant difference between illiterate and college-educated and also between school-educated and college-educated mothers.

Infant Care

Hygiene is essential for healthy living. In this sample, the hygiene of the infant was assessed with regard to regularity of bath given; use of clean, washed clothes; cutting of nails; general cleanliness and appearance and so on. As can be observed from Table 3, the extent of hygienic infant care practices adopted by the mothers increased with an increase in their income and educational levels.

TABLE 3

level of hygiene of infants in relation to family income and mother's education

Group	Level of hygiene of infant				Total (N = 100)
	Excellent	Good	Average	Poor	
Income					
Low	4(11.1)	2(5.6)	13(36.1)	17(47.2)	36
Middle	6(17.6)	10(29.4)	11(32.4)	7(20.6)	34
High	20(66.7)	2(5.6)	4(33.3)	1(3.3)	30
Education					
Illiterate	5(11.1)	5(11.1)	20(44.4)	15(33.3)	45
School-educated	9(30.0)	8(26.7)	5(16.6)	8(26.7)	30
College-educated	16(64.0)	4(16.0)	3(12.0)	2(8.0)	25

Figures in brackets denote percentage.

Nutritional Status of Infants

The infants in the sample—male (45 per cent) and female (55 per cent) had an average birth weight of 3.12 kg. According to Gomez's classification[8], the percentage of infants with mild and moderate degrees of malnutrition increased as the socio-economic conditions of the family decreased. This conforms with a study conducted by Nirmalamma[9].

According to Waterlow's classification[10]. the majority of infants were in the 'normal' category, and the proportion of those in the 'mild' category increased with a decrease in income and educational levels. Gopalan[11] reported that the socio-economic status influences growth through a direct effect on the nutritional status (height) of the individual.

The mid upper arm circumference and head circumference ratio were taken and the infants were classified into different grades of malnutrition according to the ratios[12]. Based on this classification, none of the infants fell in the 'severe' category. On the whole, the majority (70 per cent) of both male and female infants were in the 'normal' category.

In summary, family income and mother's education were found to be important influencing factors in infant weaning and health care practices. The observed differences between the income and educational groups could be threefold. First, more infants of mothers from high income groups and who were educated, were receiving nutritious supplementary foods than those of mothers from low or middle income groups or those who were illiterate. Second, many mothers belonging to the high income group and those with a college education were more aware of weaning foods and better weaning practices. And third, these mothers were also more likely to practice better hygiene in caring for their infants. The combined effect of nutrition and infant care by mothers of different income and educational levels was reflected on the growth of the infants. Thus, economic status and exposure to information in regared to weaning and infant growth and nutrition are inmportant factors influencing the health of infants.

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AMNIOCENTESIS: SOCIETAL RECEPTIVENESS OF LEGAL REGULATIONS

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INTRODUCTION

Prenatal diagnostic technology has advanced considerably in recent years. More than 190 metabolic defects and congenital disorders in addition to an increasing number of chromosomal aberrations can now be diagnosed prenatally[1]. Various methods have been applied for prenatal diagnoses, eg. amniocentesis, chorionic villi sampling, ultrasound imaging, fetoscopy and alpha-fetoprotein screening, each with a specific purpose and distinct from the other in relation to time of application and certain other aspects. A review of these tests indicates that they are highly interactive, and if a proper explanation of the foetal disorder is not found, amniocentesis can be resorted to. The costs, risks and limited availability of amniocentesis, however, restricts its use at the first instance.

OBJECTIVES

This paper attempts to pinpoint the problems attendant upon the legal regulation of the use of prenatal diagnostic tests - amniocentesis in particular - within the framework of the Medical Termination of Pregnancy Act, 1971 (hereinafter referred to as MTPA) and the Maharashtra Regulation of the use of Prenatal Diagnostic Tests and Techniques Act, 1988 (hereinafter referred to as the Maharashtra Act).

RESULTS AND DISCUSSION

· *Legal regulation of the use of prenatal diagnostic tests*

Since the enforcement of the MTPA in 1972, a pregnancy may be terminated on several grounds including that of foetal indication. Liberal abortion laws all over the world have accommodated foetal indication, which presents a legalisation of termination of pregnancy for defects not of the mother but of the unborn[2]. This encloses quite a questionable approach to the law entitling women to terminate the would-be handicapped child and not providing it any right to medication and treatment for curing its handicaps. The

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use of prenatal diagnostic tests and techniques within the MTPA involves the following multiple problems:

1. The MTPA permitting termination of pregnancy on foetal indication presupposes that prenatal diagnostic tests must be applied to ascertain defects in the unborn. Accordingly, the use of prenatal techniques is a matter of a woman's right to termination of pregnancy within the MTPA.
2. The test of substantial risk of foetal indication within the MTPA falls short of being precise and makes a freeway for the medical practitioner to use his/her discretion whether or not to terminate the pregnancy after prenatal diagnosis of foetal indication.
3. The Maharashtra Act provides that the Court shall always presume, unless otherwise provided, that a woman seeking the aid of prenatal diagnostic procedures on herself for purposes not mentioned in the Act has been compelled to do so by her husband or members of his family, who shall, on conviction, be liable to be punished for abetment of the offence for the same sentence and the woman shall be liable to pay a fine of Rs. 50 for each offence.

   Such a provision runs contrary to the framework of the MTPA, wherein the woman is solely responsible for determining with the aid and advice of a registered medical practitioner, her choice to procreate or not; and the husband or any other person bears no right to deter her from medical termination of pregnancy (hereinafter referred to as MTP).
4. At present, there is no central legislation regulating the use of prenatal diagnostic techniques in India. As the use of such techniques may be desirable to safeguard the health of the woman or the unborn child, it may be included in the subject matter of population control and family planning enlisted in Entry 20 A of List III of the Constitution of India. On the other hand, as the techniques are used to detect foetal sex leading to the practice of foeticide, the subject may accordingly be included in Entry I of List III of the Constitution. It is an irony that except for Maharashtra no state nor the centre has legislated on the subject yet.

A favourable environment involving responsive popular opinion, legal technology, infrastructure and administrative set-up are the most essential tools for implementing a legal right. It is therefore relevant to find out the societal receptivity of the law regulating the use of prenatal diagnostic techniques by examining the views of different sections of the society towards it.

Public opinion about amniocentesis

In order to collect popular responses regarding the use of prenatal diagnostic tests, a questionnaire was fielded which contained the following alternative replies; (i) to detect foetal sex; (ii) to assess the mother's health (iii); when medically desirable, and (iv) to assess foetal health. A total of 200 respondents from the district of Varanasi were interviewed for collecting popular responses. The profile of the sample was as follows: Hindu: 154. Muslim: 23, and Christian: 23; forward: 120, Backward 47:, Scheduled Castes: 26, Others: 7. Residence-wise, 33 were rural, 88 urban, and 79 mixed, while education levels indicated that 12 were literate, 33 had received high school education, 73 were graduates, and 82 postgraduate. By occupation, 41 were agriculturalists, 89 were service men, 45 were students: and 25 were businessmen; and by income, 70 had no regular income,r51 earned a monthly income up to Rs. 1000, 44 had a monthly income of Rs.1001-2000, 24 of Rs.2002-3000, and 11 earned above Rs.3000 per month. Sex-wise, 67 were male and the rest - 33 - female, and an age-wise distribution indicated that 17 were under 20 years of age, 155 were 21-40 years, 30 were 41-60 years; 131 were married and 69 were unmarried.

A questionnaire-based opinion poll conducted recently in the District of Varanasi, revealed that by and large, prenatal diagnostic tests such as amniocentesis are considered desirable when medically required (37.5 per cent) and for determining the health of the foetus (25 per cent). Undergoing such tests for determining the sex of the foetus or for assessing the mother's health was mentioned by a comparatively smailer number of respondents (19 and 17 per cent respectively). A religion-wise break up of the trend implicit in the two majority opinions stated above was as follows: among Hindus, 42.2 per cent mentioned medical indication followed by 31.6 per cent who considered a diagnosis of foetal health as the two major reasons for using amniocentesis; Muslims gave the two main reasons for justifying the use of amniocentesis as sex determination (34.8 per cent) and diagnosis of the mother's health (39.1 per cent), while Christians considered sex determination (39.1 per cent) and medical indication (34.8 per cent) as the two main reasons. The majority of forward and backward caste respondents felt that prenatal diagnosis is justifiable for medical reasons and for assessing foetal or maternal health; the majority of scheduled caste respondents, on the other hand, justified its use for detecting foetal sex (34.6 per cent) and foetal health (30.8 per cent).

Residence-wise, prenatal diagnostic tests were considered permissible for sex determination by the majority of rural respondents (39.4 per cent), and for medical reasons and foetal health assessment by most urban respondents. When educational level was considered, the just literate, high school passed (36.9 per cent), and postgraduate respondents opted in favour of prenatal diagnosis for medical reasons while graduates (30.1 per cent) considered it justifiable even for detecting sex. Occupation-wise, the majority opinion among agriculturists, servicemen, students and businessmen was in favour of medical reasons. Likewise, except for those with a monthly income of Rs.3000 and above who opted for prenatal tests for sex determination, all others justified its use for medical reasons and for diagnosing foetal health.

An analysis by sex indicated that male and female respondents were of the view that prenatal diagnostic techniques should be used for medical indication and diagnosis of foetal health respectively. When analysed by age (20 years, 21-40 and 41-60 years), and among unmarried respondents, prenatal diagnostic techniques for sex determination attracted very little support, the majority preference being that of medical need, and diagnosis of maternal and foetal health.

Evaluation of popular responses and concluding observations

As revealed by the opinion poll, foetal sex determination has been mentioned as a reason for using prenatal diagnostic tests. This opinion stems from several factors such as the existence of prenatal diagnostic facilities, advertisements, legalisation of abortion and availability of abortion services, the status of the female child, desire for a male child and so on. Since daughters are looked upon as a burden on their parents, the birth of a daughter could be avoided by parents. This would involve the misuse of such facilities as also an onslaught on the moral values relating to the sanctity of life. In such an environment, it is essential that MTP and the use of prenatal diagnostic techniques are considered conjointly in the light of the suggestions given below:

1. There should be a central legislation dealing with the regulation of MTP and the use of prenatal diagnostic techniques in the same enactment
2. The right to MTP and use of prenatal diagnostic techniques should be viewed within the ambit of a woman's right to life guaranteed by Article 21 of the Constitution of India
3. MTP and prenatal diagnostic techniques should be considered as family welfare and population control activities by Governments
4. Every district hospital should provide facilities for prenatal diagnosis. The failure of Government to provide such facilities is a violation of woman's right to life or personal liberty within Article 21 of the Constitution of India; such failure also encourages the opening of private clinics thereby enhancing the possibility of misuse and corruption
5. The application of different standards of responsibility or liability for those seeking MTP or prenatal diagnostic techniques is unreasonable. It is quite illogical to provide that the husband or family members shall be regarded as abettors of the offence or of female foeticide within the Maharashtra

Act, when the husband or any one other than the woman herself bears no right in matters of MTP within the MTPA

6. An educational and awareness drive should be launched to make medical personnel including practitioners and people, particularly women, aware of the socio-medical after-effects of MTP and prenatal diagnosis
7. Unless the status of woman is markedly improved and the medical profession takes care of the ethics and moral well being of the society, the misuse of MTP and prenatal diagnosis cannot be regulated by law
8. As the results of the most reliable tests such as amniocentesis are available only after 22 weeks of gestation, the MTPA must be amended likewise to provide for MTP till 22 weeks of gestation
9. At a time when commercial trading cannot be denied in performing MTP or prenatal diagnosis and when misleading advertisements regarding these services are employed as tools by such traders, the practice of commercial trading as above (often unscrupulous) and the matter of such advertisements must be dealt with sternly, by a central legislation
10. In times to come, trading in foeticide cannot be over-ruled and this might encourage the opening of spurious clinics and result in an increasing number of abortions not permitted or required otherwise; a feature film called *Spandan* has given a hint of the same. Suitable steps need to be taken to check the misuse and menace caused by this probable trade.

It may be submitted that while on the one hand, it is desirable that punitive measures for acts of prenatal diagnosis of sex of the unborn on the fancy and/or liberty of the wishes of women must be provided by a central legislation, on the other hand, it is equally essential that Vigilance Boards consisting of members of women's organisations, medical as well as legal; representatives of educational institutions and other organisations of agriculture, business etc. should be set up in every district (and separate Vigilance Boards in metropolitan cities/municipal corporations) with a view to caution people about the misuse of prenatal diagnostic services for sex determination leading to female foeticide.

The powers of the Vigilance Board should include: paying periodic and surprise visits to the centres, laboratories and clinics for checking the compliance of the provisions of the law; investigating into complaints made by members of the public or other institutions for contravention of the law; seizing incriminating evidence or records for further administrative or legal action; recommending to the appropriate authority the cancellation of registration of, or prosecution against, a centre, laboratory or clinic; checking and preventing the operation of unauthorised centres, laboratories and clinics; and taking such other action as the appropriate authority may direct. It is also important to mention in this context that prior to the registration of a centre, laboratory or clinic, the recommendation of the Vigilance Board of the concerned district/ metropolitan city/municipal corporation must be sought. Such Boards may also be entrusted with the responsibility of evolving attitudinal responsibility, professional ethics and a societal code of conduct amongst members of medical profession authorised to perform prenatal diagnosis and termination of pregnancy.

It is also desirable that the proceedings of the meetings of such Vigilance Boards should not be conducted in camera but prominently at such places and at such times that the general public - having been made aware of the date and venue of such meetings - is also able to participate in the deliberations of the Boards. The Boards should be required to hold their regular meetings at different venues so that the problems and preventive measures pertaining to the misuse of prenatal diagnostic techniques for purposes of sex determination leading to female foeticide and other illegal purposes are well popularised amongst the people of the locality and the subject becomes one of public interest and of public moral utility. Periodically, the Public Relations Office of every district should make suitable arrangements so that the important deliberations and achievements of the Vigilance Board are publicised and broadcast or telecast by the media.

Medical practitioners and specialists have to play a significant role for the good of society. Therefore, in order to ensure services which are in the interest of individual, community and national health, care should be taken to foment and augment a legal deterrence for such medical personnel and others who perform acts for selfish commercial motives. In order to prevent the misuse of both prenatal diagnostic techniques (for sex determination) and MTP, the following suggestions are offered:

1. Every MTP performed on the grounds of foetal indication should be performed by a registered medical practitioner only after a certificate is produced from the Medical Vigilance Board (as suggested above) that the specifically permitted foetal indication exists and that MTP is recommended.

2. The Vigilance Board should also have its own diagnostic facilities to detect foetal anomalies and maternal health, and these services should be extended free of cost to all married women in case the medical checkup suggests that prenatal diagnosis is necessarily required.

3. There should be more than one Vigilance Board depending upon the number of married women in the concerned district/ municipal corporation or metropolitan city.

4. The Vigilance Board should have active and efficiency-oriented collaborative links with governmental hospitals where MTP on foetal indication can be performed as a medically and socially warranted treatment.
5. Medical professionals or others alike should be made liable for violating the law relating to prenatal diagnostic techniques and MTP; for repeated offence, the punishment for a repeated offence should be severe.
6. In order to safeguard the woman's privacy and status in society, the proceedings of the above stated offence must be conducted in camera by a Special Court established for the purpose, on the lines of a Family Court. This court should consist of members from the medical and legal professions, reputed women's organisations, and social workers.

Among the developed and developing nations, there is an endless competition to acquire scientific and technological knowledge which may be used for either welfare or destruction of the living world. Problems are bound to occur when such knowledge is applied negligently or to attain selfish ends thereby cutting at the very roots of society. The issue of foetuses aborted following sex determination is a familiar problem which has attracted the attention of lawyers, scientists, medical professionals, social workers and also legislators. Enactments like the Medical Termination of Pregnancy Act and the Maharashtra Act are laudable model enactments, and the suggestions given herein would definitely help in enriching the legal treatment of the problemsrconcerning sex determination and foeticide in the right perspective and directior.

Above all, it may be noted that in modern times man is standing on a plank of human civilisation that forces him to receive and utilise knowledge of science and technology consciously, subconsciously or unconsciously. It is therefore of paramount importance that a universalistic outlook is maintained in matters of and about interaction between law and science or technology; unless these are wedded with a moral philosophy of human well being, law would simply fail to provide society with the necessary goods and contributions of utility.

It is gratifying to note that the government is planning a legislation on the lines of the Maharashtra Act with a view to combat the multiple problems arising out of amniocentesis and foeticide. It should, however be borne in mind that unless an effective scheme of participative management of the regulation of the use of prenatal diagnostic techniques is not launched and implemented with a strong political will supported with adequate administrative, financial and personnel facilities, it would simply be a halfway journey to tackle the problems of the misuse of prenatal diagnostic techniques for sex determination leading to female foeticide, which is, *prima facie* an act of discriminatory moral delinquency of the born against the unborn - particularly the fair sex.

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BREASTFEEDING AMONG TRIBALS: AN AID TO FERTILITY CONTROL

MS. DEEPIKA PURI *

INTRODUCTION

Breastfeeding has its socioeconomic, psychological, biological and immunological aspects. Human milk is known to be an ideal, safe and complete food for infants, and being available at a suitable temperature, it helps promote normal dental and facial development. Biologically, it leads to earlier uterine involution, thereby restoring the size of the extended uterus, Further, it is known to enhance the child's immunity[1], and saves the additional cost of milk and fuel.

Recent trends and differentials in breastfeeding practices have been shown to have a major impact on fertility[2,3]. It is considered as a natural birth spacer. Numerous studies[4-7] have reported that breastfeeding reduces the probability of ovulation by increasing the postpartum amenorrhoeal period and thereby resulting in a wider gap between two consecutive pregnancies. Despite the erosion of breastfeeding practices in developing countries it is known to provide protection against conception to about 3.4 million urban couples, while in rural areas, this number is estimated to be about ten times higher[6,8]. Short[9] reports that more births are prevented by lactation than by all other forms of contraception put together.

OBJECTIVES

In most parts of rural India, breastfeeding generally continues for more than a year, and probably plays an important demographic role by prolonging the relatively sterile postpartum period among rural women. The present study was conducted among tribals of the Udaipur district of Rajasthan among whom contraceptive practice is rare, with a view to investigate the relationship between breastfeeding and lactational amenorrhoea, which was taken as a proxy indicator for the duration of infertility, and to estimate the extent to which tribal communities are naturally protected from the risks of pregnancy.

SAMPLE AND METHODOLOGY

The study area was located about 20-24 kms. from Udaipur city in Rajasthan. Data was collected from about 200 randomly selected tribal females

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in the age group of 15-44 years. Some lactating mothers were excluded from the analysis since their suckling behaviour was so extreme that their inclusion skewed the entire data.

The tribals were endogamous groups with numerous exogamous subgroups. Three-fifths of the households were nuclear, the society was patriarchal and women occupied a relatively low position. Agriculture was the main occupation. Illiteracy was high - the schools showed poor enrolment and only about 50 per cent attendance. The situation was even worse in the case of girls who remained at home to perform domestic chores and take care of siblings. Marriage was universal and at an early age: the mean age being 16 and 22 years for females and males respectively. Bride price was practiced and paid in cash or in kind. Fertility was high with an average of 5-6 surviving children, though some couples even had 8-9 children.

Lack of employment opportunities and mass illiteracy, made small landholding the only means of livelihood. This did not yield much; some sold the small quantity of milk that they had, while a few men worked as labourers in mines, factories and transport companies. Health services were barely available - the 'Bhopa' or the local quack was the answer to all problems, be they health, land disputes or famine. Although awareness of contraception, specially sterilisation was high, the attitude was not very positive, and therefore acceptance was rare. Thus, sheer poverty, high infant loss, mass illiteracy, low women's status, traditionalism and lack of contraceptive awareness were major factors contributing to the high fertility of these groups.

The influence of variables such as the number of suckling episodes, duration of breastfeeding, parity, prenatal and infant mortality on the duration of lactational infecundability was examined. Each pregnancy episode and the corresponding duration and frequency of breastfeeding was recorded.

The following definitions were used:

Breastfeeding frequency was measured in terms of the number of suckling episodes per day. Breastfeeding duration was defined as the total time the infant or child was breastfed (in months), and the duration of postpartum amenorrhoea, taken as a proxy for lactational infertility, was defined as the period from delivery until the first evidence of menstrual bleeding.

RESULTS AND DISCUSSION

In general, the tribal females were found to breastfeed their children for at least one-and-a-half to two years. An examination of data on duration of breastfeeding by order of birth failed to reveal any clear relationship. As expected, the duration of breastfeeding was the highest (20.05 months) for the first birth order. However, after this, no clear trend was observed and the duration varied from 15 to 19 months (Table 1). In contrast, a linear relationship emerged between the frequency of suckling (per day) and birth order, starting with the second conception. In other words, the frequency of suckling was found to decline for every subsequent birth order starting from the second order, with the exception of the fifth order.

TABLE 1

Duration of breastfeeding and frequency of suckling by birth order

Order of birth	Number of respondents	Average breast-feeding duration	Frequency of suckling (per day)
1	83	20.05	6.06
2	118	18.65	6.28
3	105	18.62	6.04
4	98	18.84	6.03
5	68	19.16	6.12
6	51	18.23	6.02
7	30	18.48	5.95
8	18	15.23	5.98

It is interesting to note that, with an increase in the duration of breastfeeding, the period of postpartum amenorrhoea also increased[2,10-12]. This relationship was found to be true among all age groups (Table 2). Interestingly, the duration of postpartum amenorrhoea also increased with the age of the mother.

TABLE 2

Agewise variation in duration of postpartum amenorrhoea by duration of breastfeeding

Age of resrespond (years)	Duration of breastfeeding (months)			
	6.0-11.5	12.0-17.5	18.0-22.5	24.0+
Duration of amenorrhoea (months)				
15-19	8.23	10.19	14.46	15.45
20-24	8.76	10.35	14.10	16.21
25-29	11.96	10.60	13.12	15.85
30-34	–	10.97	12.43	17.01
35-39	–	10.36	13.10	18.41
40-44	–	12.54	16.0	–
Average	9.23	10.78	13.85	16.18

Table 3 suggests an almost linear relationship between the frequency of suckling and duration of amenorrhoea for all age groups. In general, mothers who breastfed their infants four times a day, experienced an amenorrhoeal period of 11.6 months, while those who breastfed their infants 8.1 to 10 times a day had an amenorrhoeal period extending upto an average of 14.5 months. This finding has been corroborated by several research workers.[3,6,12,13]

TABLE 3

Agewise variation in the duration of postpartum amenorrhoea by frequency of suckling

Age of respondts (years)	Frequency of suckling (per day)			
	4.0	4.1-6.0	6.1-8.0	8.1-10.0
Duration of amenorrhoea (months)				
15-19	-	13.15	13.21	10.86
20-24	12.5	12.98	14.63	15.32
25-29	11.3	13.20	13.46	14.46
30-34	12.0	13.25	15.50	15.0
35-39	11.7	13.30	16.75	-
40-44	--	13.82	12.14	--
Average	--	13.30	13.90	14.50

Numerous studies have indicated the importance of breastfeeding particularly in traditional societies, wherein it acts as a natural birth spacer[2,14,15]. Erosion of breastfeeding practices and even slight shifts have been found to increase or decrease the risk period of pregnancy. Data on birth intervals by duration of breastfeeding reveals that an increase in this period helps elongate the birth interval; the birth interval was found to increase from 1.9 years on 6-11 months of breastfeeding, to a maximum of 3.5 years with at least two years of breastfeeding (Table 4, Panel A).

TABLE 4

Average birth interval by duration of breastfeeding and frequency of suckling

A. Duration of breastfeeding (months)	Birth interval (years)	B. Suckling episodes (per day)	Birth interval (years)
6-11	1.9	5	2.2
12-27	2.6	5-5.9	2.8
18-23	3.1	6-6.9	3.0
24+	3.5	7-7.9	2.8
		8+	2.6

In contrast, no clear trend was observed between the average number of suckling episodes and the average birth interval. Panel B of Table 4 shows that the birth interval was maximum (3.0 years) for 6-6.9 suckling episodes per day and was the shortest (2.2 years) when the infant was breastfed fewer than five times per day.

Another important aspect which affects both the intensity (duration and frequency) of breastfeeding and the duration of postpartum amenorrhoea is the outcome of the previous pregnancy. Biologically, it has been shown that the regular removal of milk is essential for the maintenance of lactation. Physical contact with the baby and the sight and smell of the infant helps initiate the secretion of prolactin which stimulates secretory activity[15]. Thus, the outcome of the previous pregnancy has an important bearing on the resumption of ovulation. In an earlier study, Nag[16] found that the mean birth interval following an infant foetal death and the next conception was shorter than that following a live birth. This was attributed to the latent function of extended lactation which reduces the probability of early conception, resulting in the suppression of the cyclical changes of the ovary, ultimately prolonging the relatively sterile amenorrhoeal period. Interestingly, the mean birth interval following an abortion was found to be the shortest (1.2 years), followed by the interval following infant loss (1.6 years). The birth interval between two live births was found to be the longest (2.5 years).

In general, the tribal females were found to experience at least one-and-a-half years of lactational amenorrhoea. Both sociocultural practices and economic compulsions tend to promote and prolong breastfeeding among the tribals. Thus, breastfeeding is a major factor which (somewhat unknowingly) helps lengthen the relatively infertile period among these communities, and perhaps has a major role to play in being an effective natural contraceptive for these women who shy away from most of the modern contraceptive techniques available today. Keeping in view its practical relevance, there is a need for family planning programme managers to intensify their educational efforts to further support and reinforce breastfeeding practices.

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BOOK REVIEW

Title: **Child Nutrition and Poverty in South India**
Publishers: Concept Pubishing Company, New Delhi, 1992.

This book supplies information about a programme—The Meal Scheme in Tamil Nadu. This programme has been much acclaimed and a study of this particular intervention is a valuable contribution for nutritionists as well as economists and social scientists.

The major part of the book is primarily devoted to a description of the field research undertaken by the author in two villages in Tamil Nadu.

In Chapter 2, the author has described in sufficient detail the programme components and its implementation. More importantly, it describes the evolution of the programme and places the programme, planning and implementation in the context of Tamil Nadu's prevailing economic and political environment. This chapter provides very good insights to the reader about the influence of politics in the health of a population via such programmes. It analyses the justification given by the government for implementing such a programme. The author has also critically reviewed/assessed the programme as a nutrition intervention from several aspects which is enlightening. The role of the public distribution system and the ramifications of operating such a programme are well illustrated.

Chapter 3 describes the issues which were sought to be examined through this field research and defines how each issue was assessed. It explains each variable and more specifically focusses on the food energy economy. The section on food behaviour of households is interesting and the impact of a social deviance issue such as alcohol consumption by the male member(s) of the household on food intake is dealt with.

The next chapter "Interventions in the Rural Food Economy" yields data on coverage, offtake of grain and the implications in terms of employment, and presents information on selected non-nutritional variables which were supposed to have been improved by the scheme as declared by those who conceived and implemented this programme.

Altogether the book gives highly valuable information but does not really give an insight into the impact on the nutritional status of children or programme beneficiaries. The book is an excellent chronicle but could have dealt with the costs and benefits of excluding certain children and the implications thereof.

It is a valuable reference book for economists, policy makers and administrators, programme planners and implementators in addition to nutritionists.

Mrs. S.A. Udipi
S N.D.T. Women's University. Bombay

THE JOURNAL OF FAMILY WELFARE

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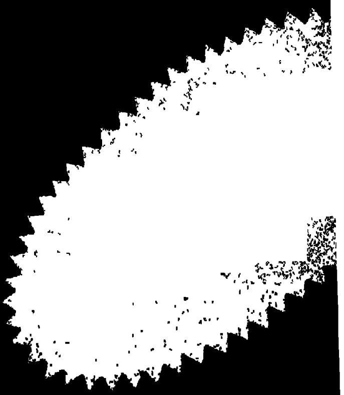

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Introduction

Mrs. Avabai B. Wadia

The International Planned Parenthood Federation which was founded in Bombay in 1952 is observing its 40th anniversary by holding its triennial Members' Assembly, combined with an international Family Planning Congress, in New Delhi from October 21-27, 1992. This is a home-coming for the Federation which, from its founding members, the Family Planning Associations of India, UK., USA, West Germany, Sweden, Netherlands, Singapore and Hong Kong now has 134 Member Associations in as many countries and activities in several others. About 400 representatives from at least 100 countries will travel to Delhi to attend this event.

The FPAI as the host organisation, has decided to commemorate this landmark event by bringing out a Special Issue of *The Journal of Family Welfare*. At the same time, this occasion has also given it the impetus to change its 37-years-old format and to adopt what is, hopefully, a more contemporary garb. The old format was familiar and easily recognisable, but change can be refreshing and rejuvenating; though ultimately, it will be for our readers to decide whether or not it is for the better.

This Special Issue aims to acquaint our Indian readers in particular, with some of the accomplishments of this largest international NGO in the field of family planning. The activities carried on by some other major international agencies with whom it co-operates, are also outlined. Together, they will indicate the enormous spread and influence that the family planning movement has acquired all over the world in less than half a century - a sure sign that it is fulfilling a deeply felt need of peoples everywhere. IPPF's membership represents the world in microcosm, and is an example of how world unity can be forged without discrimination as to race, religion, creed and sex especially in furtherance of a humanist cause for raising the quality of life of people all over the world.

The IPPF has two major goals - to promote family planning as a human right and to work for a balance between population, development, and the environment, which can also lead to prosperity and peace.

It observes three basic principles, namely, to respect the sovereignty of countries to make their own policies and programmes; to respect the autonomy of its Member Associations to work according to their own national needs and perspectives whilst at the same time contributing to the formulation of, and adhering to, IPPF policies; and to uphold the principle of a voluntary, informed choice by individuals and couples, to decide freely on the size and spacing of their children whilst paying due regard to the future of those born and to the welfare of the community.

From modest beginnings, at which time opposition and opprobrium were constantly encountered - and still exist in pockets - IPPF now musters many thousands of volunteers from all walks of life who give freely of their

Mrs. Avabai B. Wadia is President of the Family Planning Association of India, and Immediate Past President and Patron of the International Planned Parenthood Federation.

time, energy and talents, backed by expert staff who bring special skills and full time service. Both complement each other in ways where their own special contributions can most effectively promote the aims of IPPF.

The structure of the Federation begins at the roots where there is one Member Association per country, and together they constitute the IPPF. Owing to its geographic spread, six Regions have been established for efficiency in management and implementation of programmes and Member Associations belong to the Region in their area. They elect a Regional Council to represent them. In turn, the Regional Council sends representatives to the Central Council which meets annually usually at the London international office, and is the policy making body of IPPF, while in between its meetings a Central Executive Committee meets more frequently to transact business. Finally, there is a Members' Assembly which meets every three years, consisting of representatives sent by every one of the FPAs as is the one that will convene in Delhi in October 1992.

This democratic structure from the national to the international level and back again to the national FPAs has played a crucial role in making IPPF a people's organisation rather than one of experts or notabilities who pass down policies. It adheres to the basic principle that policies and programmes must evolve from the bottom up, and not through some international power fulcrum.

Within these four decades many agencies have arisen which work for aims similar to those of IPPF, including the UN agencies, chiefly the UNFPA, and expert institutions like the Population Council. The UN agencies provide financial and technical aid to governments though they are increasingly keeping in touch with NGOs. But IPPF is a non-governmental organisation with an extensive grassroots base. So that even UN agencies, donors and expert bodies very often turn to the FPAs to be the implementors or catalysts for actually executing programmes.

IPPF goals are promoted through multiple approaches and in co-operation with other agencies as befits measures for human welfare and happiness. In particular, the approaches adopted by IPPF demonstrate the inextricable linkages between the three overarching factors of population, development and the environment, based on a holistic attitude.

IPPF, with the FPAs, devises programmes which serve the underprivileged and the under-served, bringing education and services in family planning and allied subjects which, while vitally important in themselves also help people to understand the importance and need for family planning. It is action-oriented and a catalyst to release people's energies to help themselves.

In these 40 years of dedication and hard work, IPPF has made its mark as a pathfinder and leader, and contributed significantly in creating a world climate of understanding and acceptance of population and family planning policies. It has made important inputs into the world conferences convened by the UN for population and family planning, for women's status, children's rights, for youth concerns and for human rights in the family. In 1985, IPPF won the UN Population Award consisting of a gold medal and citation and in 1987 the Third World Prize, as also the WHO medal in that year.

FPAI, through this issue of the Journal, salutes IPPF on having wrought a social revolution the world over, and is confident that it will play an even more notable role in enhancing humanist values in the coming years.

Message

Dr. Fred Sai
President
International Planned Parenthood Federation

It is highly appropriate that IPPF is holding major events, including an International Family Planning Congress, in India, one of the very few countries in the world where research into new contraceptive technology is being undertaken.

As a physician, it exasperates me to see the massive unmet need for family planning, and the numbers of people dissatisfied with the methods currently available to them. IPPF's most recent Annual Report suggested that 500 million couples are denied quality family planning services, 200 million of those being unhappy with existing provision.,

It is a great encouragement to me to see that India has pioneered the first non-hormonal contraceptive pill, and is actively involved in other research, which other countries fear to touch.

In the same spirit of innovation and creativity, FPAI is doing its utmost to network through all sectors of society to spread the word about the health benefits of family planning and to provide services. Its recognition by the government is well-deserved and I pay tribute to its continuing success in this, the 40th anniversary year of IPPF.

Message

Dr. Halfdan Mahler
Secretary General
International Planned Parenthood Federation

It is a very great privilege for IPPF to be celebrating its 40th anniversary in this tremendously important country, which is also our birth place.

FPAI has a very special place in our hearts, being one of the eight founding members of the Federation. It has also been a guiding force throughout our history. IPPF has achieved a great deal during the past 40 years.

I hope this meeting of the key players in family planning, both at the Members' Assembly, so generously hosted by FPAI, and at our international Family Planning Congress, will ensure that we continue to make a significant difference to the health and well-being of families and individuals for generations to come.

The Family Planning Association of India has already made a major contribution to that and will continue to influence the work of Family Planning Associations in every corner of the globe.

Family planning in the 1990s

Dr. Pramilla Senanayake

The responsible planning of births is one of the most effective and least expensive ways of improving the quality of life of individuals and communities, particularly in the developing world.

The International Planned Parenthood Federation is one of many international organisations that has recognised the important role that family planning will play in the coming decade. Within the context of both maternal and child health and also sustainable development, the international community now realises what a positive and beneficial effect family planning information and services has upon individuals. Additionally, the full health implications of not providing adequate and affordable family planning services has been well documented.

Unmet demand

However, there are still as many as 300 million couples who wish to use a modern form of contraception but who are denied access to services and information. More than 500,000 women die every year of pregnancy-related causes, and a further five to ten million are left severely disabled after pregnancy. Inadequate birth spacing is the direct cause of death for over five and a half million children annually. Opposition to family planning is also still apparent as illustrated by the somewhat limited discussion of family planning at the recent UN Conference on Environment and Development held in Rio de Janeiro.

Improved technology

Professionals and clients have often suggested that contraceptive technology has continually failed to provide adequate or appropriate forms of contraception. There is no doubt that the 'perfect' contraceptive device has not yet been developed, or that resources must continue to be allocated to contraceptive research. However, the range of safe and effective forms of contraception currently available should satisfy the particular needs of the vast majority of couples who wish to practice family planning. The wider distribution of low-dose oral contraceptives, the availability of the long-acting contraceptive implant (Norplant), and the development of improved injectables have all contributed to this range of choice. The development of entirely new methods such as the hormone-releasing vaginal ring and the female condom have also extended the contraceptive 'menu'.

Service delivery

It is not contraceptive technology but the inadequate levels of service delivery, particularly in rural areas of the developing world, that is limiting access and provision of family planning. Current provision and distribution of contraceptives must be reassessed and readjusted to ensure that those people who require services most have ready and easy access to affordable and reliable services.

In the coming decade, it is important that the design of family planning and family health

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programmes is suited to rural and local communities. All too often such programmes have been designed at the national or international level, resulting in a disproportionate emphasis on urban populations. It has also been the case that the aims and interests of the providers and managers of family planning programmes have influenced the design of programmes. As a result, the needs of the consumer have sometimes been lost or neglected. Rural couples who wish to plan their families have often been forced to travel long distances for supplies.

Ready and easy access to family planning (less than two hours a month spent on obtaining supplies, and an annual cost of no more than one per cent of income) is least likely in rural areas, where lack of services may have the most acute effect upon the immediate and long-term health of women and children. It is imperative that users of services become more involved in the design and implementation of programmes. Only in this way will providers and managers be able to respond to the real rather than 'assumed' needs of those people most in need of services.

Quality of care

Within the context of need and expectation, notions of quality of care and client-satisfaction must be more generally accepted. Experience has illustrated that the most effective and long-lasting family planning programmes are those that provide choice, continuity, and understanding. Inappropriate, coercive or unsympathetic services will be rejected by those who expect to improve their lives through family planning - and rightly so. Policy makers, politicians, the medical profession, and health workers must be continually aware that it is a basic human right for a man or woman to plan his or her family. And these organisations and individuals must provide that right with a full understanding of the needs and expectations of those men and women wishing to exercise that right.

Community based services

Although doctors in the developing world have made considerable efforts to provide family planning services, these professionals have been limited by time, money and lack of support. Health services in the developing world are already severely constrained by budget and staff shortages. Alternative channels of contraceptive distribution must be explored. In settings where there is limited access to doctors, the social marketing of contraceptives has proved successful. Commercial channels for affordable marketing of contraceptives have been explored in Africa, Sri Lanka, Jamaica, and Indonesia, with great success. Family planning organisations must also make more use of nurses, traditional birth attendants (TBAs), midwives, and other health personnel, in the distribution of contraceptives.

Community based distribution and social marketing of contraceptives will provide a useful support to the medical profession in efforts to provide family planning to rural communities (criticism that this non-formal design of provision results in unsatisfactory service and instruction is unfounded). Community health workers and religious leaders can also play an important role in providing services to local communities.

Contraceptive manufacture

The developing world must also become directly involved in the actual production of contraceptives, and move away from its reliance on industrialised countries for contraceptive supplies. Some developing countries are already producing contraceptives, but a vast expansion will be needed in response to demand. Funds must be earmarked for the development of 'western-style' forms of production in the developing world. This investment will not only generate income but also improve the continuity and reliability of national distribution. Within the context of national development, this new industry could well provide a new impetus to local economic growth through employment and trade.

Young people and family planning

Any discussion of future family planning programmes must also account for the ever-increasing youth population worldwide. Almost 20 per cent of the world's population is currently between the ages of 15 and 24. Accounting for religious and cultural attitudes, policy-makers at all levels must evaluate and target the needs of this population.

Education has proved an effective and enhancing weapon in efforts to decrease unwanted adolescent pregnancy. Despite protests from opponents of sex education for youth, experience has shown that early access to sex education contributes to a decrease in unwanted adolescent pregnancy. Suggestions that such an approach only encourages promiscuity among young people are emotive rather than scientific, limiting rather than edifying. The spread of AIDS and HIV amongst young people will be slowed in part through the provision of accurate and relevant medical and sociological facts. On the assumption that we must do all we can to improve our children's lives, there is a basic logic in providing young people with information and services that will directly improve their quality of life.

Women and family planning

Since it is women who are most directly affected by any population or family planning policy, they must be central to any future development. Women must be provided with good quality family planning services. These services must include access to information and counselling, the ability to make an informed choice, and access to a wide range of safe and effective contraceptives. Improvement in the health, social and educational status of all women must be accelerated. Only in this way will women have the knowledge and the means to control their own lives. Where access to safe abortion services reduces the death toll and suffering of women, governments and NGOs must work towards a legal and social climate that will provide women with this service. Where women are burdened by social, economic or legal inequality, vigorous efforts must be made to redress these inequalities.

AIDS, STDs and family planning

The AIDS epidemic has increased the financial strain on both the private and public sectors, at a time when financial resources are already limited. Those involved in sexually transmitted disease (STD) prevention programmes and AIDS prevention programmes must ensure that they do not mirror or duplicate each other's work. The provision of barrier methods of contraception must be coupled, where appropriate, with STD and AIDS prevention programmes. Prevention of STDs should also be incorporated into family planning programmes since the risk of STD infection can influence contraceptive choice and some STDs can cause infertility.

The marginalisation of people with AIDS or HIV will only increase the spread of the disease. In the absence of a vaccine or cure for AIDS and HIV infection, health workers and individuals must do all that they can to develop understanding and preventive education resources about the disease that has already affected so many people.

Conclusion

The provision of affordable family planning services to all those who wish to use them has a cost, but a relative cost. The United Nations has estimated that US $ 2.5 billion in external assistance is required annually to meet existing family planning needs, increasing to US $9 billion by the year 2000. Before the Iraqi conflict, nations of the world were spending US $2.5 billion every day in peace time on armaments. US citizens spent twice that amount on food for their dogs in 1990. If family planning services are not provided, women and children will continue to suffer, and the already accelerating depletion of the earth's resources will increase.

A 40th anniversary is a time for celebration and reflection. It is also a time for all of us to recognise the full implications of not responding to future challenges - challenges that require renewed and immediate action.

The IPPF 40 years on: Meeting challenges promoting choices: A better future for all

Ms. Sunetra Puri

Founding and aims

This year marks the 40th anniversary of the International Planned Parenthood Federation (IPPF) - 40 years of advocating and providing family planning worldwide for family well-being and 40 years of campaigning for raising women's status and welfare. IPPF believes that family planning is a basic human right and that a balance between population and natural resources is a necessary condition of human happiness, prosperity and peace.

Founded in Bombay, India, in 1952 by volunteer leaders of eight Family Planning Associations (FPAs), today IPPF has members in over 130 countries. The membership extends to all continents; there are family planning associations in the Pacific and Caribbean islands as well as in the largest and most populous countries such as China, India, and the USA. The FPAs are divided into six regions: Africa, Arab World, East and Southeast Asia and Oceania, Europe, South Asia and the Western Hemisphere. IPPF is the leading voluntary family planning organisation and the second largest non-governmental organisation, the first being the Red Cross.

Forty years on

These 40 years have also seen attitudes changing towards family planning. The FPAs who in the early years pioneered family planning in their countries faced resistance from every quarter. Gradually, the attitude of governments and the public changed as FPAs in many countries demonstrated the need for family planning and proved its vital role in health planning. Today, only four of the world's 170 countries deny their people access to family planning services, while 144 provide either direct or indirect support to family planning programmes.

There has also been dramatic change in the international arena during the last 40 years. Family planning was considered a human right in the 1968 Teheran Declaration of Human Rights. IPPF was present at the conference and continued to lobby in various UN fora for the consideration of population issues when planning for the future and for the provision of family planning information and services to couples.

Around the same time, the UN Status of Women Commission confirmed the link between family planning and women's development - a proposal put forward by an Egyptian family planning pioneer who was also a government delegate to the commission. Today, the United Nations Population Fund (UNFPA), set up in 1969, supports governmental family planning programmes worldwide, and family planning is regarded as an inherent part of the work of all relevant UN agencies. As an NGO with Category 1 status with the UN Economic and Social Council, IPPF continues to advocate the importance of family planning and its link with child survival, women's development and status, the family and the environment. At the

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World Summit for Children in August 1990, 70 heads of state called for an extension of family planning services to all who wanted them.

IPPF policies

IPPF policies are formulated and agreed to by representatives of its member FPAs. These Associations elect representatives to Regional Councils which, in turn, elect representatives to the Central Council. This determines IPPF policies and directs the Federation's work. Every three years a Members' Assembly reviews the role of IPPF, considers the way its objectives can best be accomplished and approves its Three Year Plan. In this way, all IPPF's policies reflect the needs and the aspirations of its member grassroots organisations.

Family Planning Associations

The member Associations are at various stages of development. Many FPAs pioneered family planning in their countries, and as responsibility for services was accepted by the governments, the FPAs concentrated on improving the quality of services, developing training models, initiating innovative approaches and extending information to crucial groups, such as young people. Some are new FPAs, just starting to build the network of services. Some are the main providers of family planning in their countries, such as the Colombian FPA, Profamilia, which provides the majority of services in a country where 66 per cent of women of reproductive age with partners use contraception. Profamilia has not let the internal 'drug wars' completely disrupt its services. It has organised mobile units to bring women from affected rural areas to its 21 urban clinics for services. The island FPAs in the Pacific and the Caribbean have grouped together as the Caribbean Family Planning Affiliation and the Pacific Islands Planned Parenthood Affiliation to operate cost effectively. Whatever the stage of development, all are bound together by the common aim of meeting the unmet need for family planning and ensuring that each child born is a wanted child.

The FPAs are autonomous and voluntary and are always set up and run by local people. With well-placed and influential leadership at the top, the FPAs are generally pioneers of family planning in their countries. They then reach out into the community with an extensive branch structure and a widespread network of grassroots volunteers. The China FPA can count millions of volunteers who support its information and education efforts. In Sri Lanka, a band of about 40,000 volunteers, mostly well-trained young women in their teens or twenties, work with local village committees in motivational programmes.

FPAs have strong credibility because they have a local base and are indigenous to their own cultures. Hence they have been able to adapt innovative ideas to suit their cultures. FPAs have been able to deliver tailored in and out-of-school education in the areas of population, family life and sex education to young people, according to the norms of their societies. The Ethiopian FPA runs the only youth counselling service in the country. Several FPAs in the Caribbean and Africa have initiated male involvement programmes in recognition of family planning as the responsibility equally of men and women.

FPAs have a capacity for risk-taking, since they are flexible and can innovate in ways which may be difficult for governments. They have been in the forefront in setting up adolescent services and focussing on women's concerns. The Indonesian Planned Parenthood Association has opened up an adolescent counselling centre which protects the confidentiality and privacy of its young clients. The Hong Kong FPA conducted a first-time survey of adolescent attitudes on sexuality and contraception before establishing services for this group. These were widely publicised in the media. Eight African FPAs have embarked on an 'empowerment of women' project. In response to the AIDS crisis, IPPF took a lead in establishing an AIDS Prevention Unit to assist family planning workers in recognising and referring AIDS patients.

IPPF continues to respond rapidly to the needs of people. It was the first organisation to fly contraceptives to Romania when the Ceausescu regime was overthrown and the extent of misery, especially for women, was exposed. The Association for Contraception and Sex Education (SECS) was formed and has initiated contraceptive training programmes.

IPPF has always tried to make a special effort to meet the needs of vulnerable groups and communities where government services are not readily available or accessible, such as for the young, women, rural and urban slum communities. In Africa, in spite of ongoing sensitivity and deep-seated controversy, a variety of family life education projects for young people has been developed. To advocate the need for services for the young, the Swaziland FPA has initiated a study to ascertain the extent of adolescent pregnancies and their consequences. The Mexican FPA, MEXFAM, has an intensive communication programme aimed at young people. The Indian FPA's rural integrated projects serve 2.2 million people in over 2,250 villages. These operate through a network of local voluntary groups, among them women's organisations, youth clubs and farmers' clubs. They constitute over 90,000 village volunteers. The Pakistan FPA runs 160 rural welfare centres and in many other villages influences local village leadership groups.

In all their work, IPPF and the FPAs have linked up with other development and women's groups and have experimented in the development of many forms of community participation. With the Japanese Organisation for International Cooperation in Family Planning (JOICFP), for example, FPAs in Asia, Latin America and Africa have integrated family planning with nutritional improvements and parasite control.

Standard setting

IPPF's International Medical Advisory Panel (IMAP) and its International Programme Advisory Panel (IPAP) serve as watchdogs on medical and programme standards. IMAP consists of distinguished specialists who advise IPPF on the safety, effectiveness and acceptability of contraceptive methods, standards of clinical, community and commercial service delivery, drug regulation prescription requirements, and scientific aspects of the manufacture, supply and shortage of contraceptives. IPPF's programmes and policies emphasise counselling and informed consent. IMAP has developed guidelines on minimum standards and quality assurance of contraceptive delivery, and these are being introduced to FPAs and regions.

Advocacy

IPPF continues to advocate the aims for which it was originally set up, through its information services, publications and quality medical programmes. The advocacy work is done both at the global level and by FPAs in their countries. As a result of its consultative status with the United Nations Economic and Social Council it has similar status with all other specialised agencies. A Memorandum of Understanding has been signed with the United Nations Population Fund and with the World Health Organization to enable collaboration on programme and medical issues. It also works with other NGOs both at the international and national levels.

However, in many countries there are still tough battles to be fought against bigotry and the misunderstanding of family planning. In Ireland, women are not accorded the basic human right to choose the number and spacing of their children. They are denied access to family planning in spite of the fact that their government has ratified the UN Convention on the Elimination of All Forms of Discrimination Against Women. The Irish FPA is playing a dynamic role to ensure this basic human right, in spite of its legal and financial problems. Fear, misunderstanding and dogma are also undermining government and voluntary family planning programmes in such countries as Poland, Nigeria and the Philippines.

Challenges for the future

Dealing with opposition to its work and continuing to ensure that every child is a wanted child is not the only challenge faced by IPPF. Half a million women die annually from pregnancy-related complications. One in five infant deaths could be prevented in developing countries if the pregnancies were spaced. The family planning needs of 300 million couples are not yet being met.

The vast unmet need for family planning in Eastern Europe is growing due to political changes there. In addition, there is the need to extend quality and cost effective services which take into account the user perspective. Family planning services also need to be broadened to look at total reproductive health needs.

In the meantime population is set to rise from 5.4 billion in mid - 1991 to 6.4 billion in 2001 and 8.5 billion in 2025. Expectations that population will stabilise at about 10.2 billion in about 2075 are being questioned. Some analysts suggest that 10 billion may be reached by 2050 and that population growth will continue for a century after that, levelling off at about 11.6 billion

The Challenges for IPPF continue. IPPF will meet them as it did 40 years ago - based on the need to provide reproductive choices and health to couples, to ensure that every child is a wanted child and therefore ensure a better future for all !

When the IPPF Members' Assembly meets in India this October, in the country in which it was formed 40 years ago, delegates will address the issue "promoting choices, meeting challenges". In that vein, the "brave and angry" spirit will continue into the next millennium.

In **1830** the **first billion** people was reached.

100 years later...
in **1930** the **second billion** was reached.

30 years later...
in **1960** the **third billion** was reached.

15 years later...
in **1975** the **fourth billion** was reached.

12 years later...
in **1987** the **fifth billion** was reached.

11 years later...
in **1998** the **sixth billion** will be reached...

Source: United Nations Population Fund

Population growth

- Approximately 95 per cent of this growth is occurring in developing countries.
- Currently, one third of the world's population is under the age of 15 and will soon enter the reproductive bracket, giving more potential for population growth.
- The UNFPA estimates that world population is most likely to nearly double to 10 billion people in 2050, peaking at 11.6 billion in 2050. But the figure could be as high as 12.5 billion in 2050, heading towards 20.7 billion a century later.
- The expected number of births per women, at current fertility rates, in: Africa 6.1; Asia 3.2; LatinAmerica 3.4; North America 2.0; Europe 1.6.

The role of UNFPA in India

Mr. Tevia Abrams

The UN Population Fund (UNFPA) is now well into its third decade of work in support of population and related programmes around the world. This multilateral organisation thus stands shoulder to shoulder with the International Planned Parenthood Federation (IPPF), and here in India, with the Family Planning Association of India (FPAI), in vital efforts aimed at bringing population into balance with the world's capacity to support it.

Over the years, UNFPA has developed new areas of focus and thrust, but it has always kept its broad goals in view. From the first perceptions of linkages between maternal and child health care and family planning, education and communication, data collection, demographic research, and population policy formulation, the spectrum has been enriched and made more incisive with concerns for raising women's status, promoting women's education and income generating capacities, and lately, with precise linkages between population growth and the capacities of the supporting environment. Unfortunately, at this period of rich operational knowledge gained from years of valuable experience, donor assistance is not currently able to match critical programme needs. The hope is that the donor community may soon be able to recover from the present economic downturn and from the extreme demands placed recently upon them for peace-keeping and refugee maintenance costs in troubled areas of the world.

UNFPA's current perspective is guided by plans now being shaped for the 1994 World Conference on Population and Development, which is to be held in Cairo, Egypt. Insights and experiences from the different regions of the world are being compressed into regional declarations and background papers which will provide significant substance for the Cairo conference. In this region, the Asia and Pacific Population Conference, which was held in August 1992, provided a strong display of regional agreement on a number of policy and substantive concerns, including links between population and environment, migration and others. Additionally, a number of Experts Meetings are being held to present technical inputs on such topics as Population Growth and Structure; Population Policies and Programmes; Population Development and the Environment; Population Distribution and Migration, including International Migration; Women and Population; and Family Planning, Health and Family Well-being. The latter meeting, incidentally, is being hosted by the Government of India and will be held in Bangalore late in October this year. Expectations are that at the 1994 Conference, a clear path, agreed upon by consensus by the countries of the world, would be pursued with more vigour and effectiveness through the few years remaining in this century and into the early part of the next century.

As for UNFPA's efforts to help the Government of India stabilise the population in this

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sub-continent, it should be stated straightway that our input is small by comparison with that expended by the Government itself. Nevertheless, we are challenged by the task that we have mapped out in collaboration with various Government departments and with our nodal Ministry - Health and Family Welfare.

Our current programme of assistance, running from 1991 through 1995, is helping Government to identify needs within various sectors and to provide assistance that would respond effectively. Almost half of the programme is committed largely to Area Projects in Rajasthan, Himachal Pradesh and Maharashtra. The goal for the three states: to improve the quality of maternal and child health and family planning (MCH/FP) services and to generate demand for them.

As we approach the mid-term of the life of the Area Projects — begun under the previous programme in 1989/1990 — a number of problems have been identified and efforts are being directed to overcome them, particularly in the areas of training, increase in construction costs and in the qualitative improvement of services. And there are also more positive results as for example, in the Rajasthan Project, where demand for service is noticeably growing as a result of the promotional efforts of the innovative Information, Education and Communication Bureau which is serving the requirements of both health and family welfare activities. There are also growing pockets of new intensive service delivery points in Rajasthan which give hope to the project planners that good progress may yet be achieved before the completion of the project. Moreover, there are now plans for World Bank support to areas not covered under the UNFPA Rajasthan Project, and this may give a valuable boost to Government effort to bring down the State's high population growth rate and to improve the quality of life for its people.

Self-sufficiency in the production of condoms and IUDs, trials and research for the introduction of new contraceptives are also called for as part of the strategic direction of the UNFPA programme, while the remaining resources in this sector will be directed to improvements in quality control.

NGOs are also singled out for UNFPA assistance and efforts are being pursued with Government to develop channels of assistance to them. A notable example of such support at present is the Working Women's Forum which is carrying out a revolving credit scheme to promote income generation among female slum dwellers in Madras and to provide, at the same time, population education and MCH/FP services. Activities in the organised sector — tea estates, farm co-operatives — are also featured within the UNFPA programme.

In other areas, UNFPA funds are providing continuing support to the ongoing population education programme and to strengthening its activities in the school system as well as in the university system. Adult education activities are also being pursued, with special attention being paid to women. The programme also emphasises women's socio-economic development through literacy build-up, promotion of training and employment opportunities, and sensitisation of the bureaucracy, as well as the medical and health establishment, to gender issues. A project now under development for Haryana State will be incorporating this focus upon women.

Modest advocacy efforts to help mobilise the vast private sector on behalf of the programme are also being undertaken within the framework of the ongoing programme.

These are but a few highlights of UNFPA support to India's national population programme. While it is difficult in this brief space to provide a graphic sense of the reality of the on-site activities referred to above, we are nevertheless certain that behind many of the project titles are people in both rural and urban settings who are increasingly benefitting from this support, in terms of raised awareness and better service and care.

Also, in areas where opportunities for education and income generation for girls are aimed to promote their greater control over family size and to improved socio-economic status for families, UNFPA and the Government envisage smaller families able to secure happier and healthier lives for themselves. Where service delivery for MCH/FP is raised in quality, we anticipate that growing demands would ensure full utilisation of such services, and where school children are provided the tools for thinking and understanding about issues on population, the hope is that they would grow into aware adults who could more easily make determinations regarding family size and who could seek out the means to ensure this.

With the continued rapid expansion of population in the country, set against a backdrop of growing depletion of the environment's capacities to nourish these numbers, the task ahead is monumental — for Government, the United Nations System, the bilateral donor community representatives and the thousands of NGOs now operating throughout the country.

In the context of this overwhelming challenge, FPAI and UNFPA are linked by destiny to work, as noted in the outset, shoulder to shoulder.

Where in the world do they live?

Of every 100 people in the world in 1991,
21 live in China (mainland)
16 live in India
4 live in Indonesia
2 live in Japan, 2 in Pakistan, and 2 in Bangladesh
1 lives in Vietnam, 1 in the Phillippines, 1 in Iran, and 1 in Thailand
5 live in the United States
3 live in Brazil
2 live in Mexico
5 live in the Soviet Union
1 lives in Germany, 1 in Italy, 1 in the United Kingdom, and 1 in France
2 live in Nigeria
1 lives in Ethiopia
1 lives in Turkey, and 1 in Egypt.

Thus, 75 of each 100 persons live in just 22 countries. The other 25 live in any of remaining 184 countries.

Source: World Population Profile: 1991,
US Bureau of the Census, 1991.

The six Regions of the International Planned Parenthood Federation - Africa Region, Arab World Region, East & South East Asia and Oceania Region, Europe Region, South Asia Region and Western Hemisphere Region - encompass Member Associations in 134 countries. Together, they account for over 95 per cent of the world's population. While the democratic structure of the Federation ensures that all points of view from a diversity of cultures and traditions are adequately represented in its aims and policies, its volunteer base gives it a truly grassroots character, enabling it to respond to the needs of the people as perceived and expressed by the people themselves.

In this issue, we present brief profiles of the six Regions drawn from reports sent to us by their Regional Directors as well as from the Annual Reports (1985 to 1991-92) of the Federation. The profiles provide a glimpse into the wide variety of approaches used by Member Associations to improve the quality of life of the people they serve by enabling them to exercise their basic right, that of access to information and services to decide freely and responsibly the number and spacing of their children.

Beginning 1990, IPPF has been engaged in the process of strategic thinking at the international, regional and national levels. Member Associations are re-examining their missions, roles and programmes to find ways of increasing their relevance and effectiveness. Following an initial group of six Associations - one from each Region - who participated in the Family Planning Challenges of the 90s initiative, many others have joined and are at different stages in developing their future goals and strategies.

AFRICA REGION

This IPPF Region has campaigned vigorously to reduce sensitivities to family planning. Today, from a beginning of Member Associations in 6 countries, it spans 25 countries and has established programmes in 12 others. With the world's highest growth of 3% per year, Africa's current population of 650 million is expected to reach 900 million by 2000 A.D. However, the new, less hostile environment, and the high level of awareness due largely to the IEC activities of the FPAs, has resulted in a rapidly growing demand for services. Moreover, not only have most African governments started their own "Family Health"

Member Associations:

Benin
Botswana
Burkina Faso
Central Africa
Cote D'Ivoire
Ethiopia
The Gambia
Ghana
Guinea (Conarky)
Kenya
Lesotho
Liberia
Madagascar
Mali
Mauritius
Nigeria
Rwanda
Senegal
Sierra Leone
Swaziland
Tanzania
Togo
Uganda
Zaire
Zambia

Other Grant-receivers:

Angola Burundi
Cameroon
Cape Verde
Chad Congo
Guinea-Bissau
Malawi Mozambique
Namibia Niger
Zimbabwe

Expanding Quality Services:

- Social marketing programmes have been successfully tried out by the FPAs in Zimbabwe and Ghana.
- The FPA of Swaziland is one of the FPAs which has established family planning programmes in the workplace.

▲ Children taking water from a newly dug well in Tanzania

- In Kenya, the Government has provided the necessary funds to the FPA to build and run new clinics.
- Some FPAs e.g. in Tanzania and the Gambia have successfully integrated parasite control with family planning and nutrition; impressive increases in rates of contraceptive prevalence and immunisation along with declines in the incidence of worms in children have been noted.
- Most FPAs have identified and trained community workers to distribute contraceptives. Among them are the Nigerian FPA which uses "market women" and the Ghanian FPA which has successfully used"Daddies' Clubs" for service provision.
- In Mauritius, vending machines are responsible for sustaining the high level of practice, even among youth.

Information and Advocacy:

- Programmes of FPAs in many countries in the Region have been greatly hampered over the last two years by socio-political and economic upheavals on the continent. These FPAs are actively engaged in maintaining and developing their programmes.
- Following a series of seminars for journalists organised by the Regional Secretariat, FPAs are making extensive use of mass media for educational purposes, and also receive adequate coverage of their activities. Many have co-opted trained journalists on their programme committees.

▲ The growth of this little boy is being measured at a health centre in Rwanda.

programmes but a number of organisations have entered the field, and are seeking help from the FPAs which are the leading family planning NGOs in their respective countries.

The major concern of the FPAs in the Region therefore is to look for new ways of delivering services both in terms of widening outreach and enhancing quality, as well as mobilising resources to meet the demand. Other areas of concern include institution building, and innovative IEC approaches aimed at young people, women in the reproductive ages and men.

- AIDS control education, marriage guidance, infertility counselling and referrals, and treatment for STDs are an important part of FPA priorities.

Training: Several FPAs are in the forefront in providing quality family planning training.

- The Tanzanian FPA has made a large contribution nationally in the training of service providers, while the FPAs of Benin, Senegal and Ethiopia train government medical and paramedical personnel in family planning techniques.

  The FPA of Mauritius has an ongoing programme of training doctors in voluntary surgical contraception.

  The Centre for African Family Studies, the Regional training institution, plays a key role in meeting training needs in the Region, particularly in contraceptive technology, clinic and client management.

Youth Programmes: Young people who constitute 46 percent of the population, are an important programme focus.

- The FPAs in Botswana, Togo, Burkino Faso and Ethiopia among others, have established youth counselling centers where family life education is provided to groups and individuals.
- In a slum area in Livingstone in Zambia where unemployment and adolescent pregnancy rates are high, a group of girls and boys receive training in tailoring/wood carving as well as family life education, family planning and health education. The project's netball team is used to advertise the project and recruit new members as also to promote family life education.

  In co-ordination with a women's organisation, the FPA of Mali trains young women who are illiterate or school drop-outs in an economic skill as well as family planning, health and nutrition. Birth spacing practices among the trainees have increased with a concomitant decline in the rate of pregnancy.

  In Ghana and Kenya, youth club members are trained to provide community based services for young people. They also lead discussions and stage plays on responsible parenthood.

POPULATION PROFILE

Population estimate mid-1992 (millions)	451.7
Percentage rate of natural increase	3.1
Infant mortality rate (per 1000 live births)	107.7
Total fertility rate	6.7
Percentage population under 15 years	46.0
[illegible]	[illegible]
[illegible]	[illegible]

The values are weighted averages.
*Excludes any country for which figures were not currently available

Population information: Vital component of IEC

Ms. Frances Dennis

The acronym IEC is unique to the population/family planning field. It is not used in any other area of social development, although the practices that are involved are common to many programmes intended to bring about social change. Its application arises from the recognition that for population policies and family planning programmes to succeed, fundamental changes in political and social behaviour have been and continue to be necessary. The behavioural change required to move from haphazard, 'will of-God' attitudes to childbirth to deliberately planned and smaller family norms is greater than that expected of men and women in most other areas of modern society. Likewise, the decision of governments to formulate population policies and accept responsibility for delivering contraceptive services has been one of the most notable developments in recent political history.

IEC comprises a package of activities which interact with and reinforce each other to create public awareness and behavioural change There are no hard and fast divisions between the three components of information, education and communication. It is the job of Information to get the messages right, the duty of Education to make those messages learned and understood and the role of Communication to gain them wide public acceptance. At the field level the distinction between them is blurred or even non-existent. Information - about the merits of slowing down rates of population growth, the health benefits of birth spacing and the safety and efficacy of various methods of contraception flows to people through the education and communication processes. IPPF's member Family Planning Associations usually have Information and Education Officers, responsible for all three activities.

A base for policies /programmes

At the international level, the trend in recent years has been toward the development of different disciplines. Population information is the knowledge base on which all policy decisions and programme directions, including IEC activities, depend. It is a multidisciplinary field, not yet well-defined and subject to rapid change as knowledge and understanding increases and as the relationships with other aspects of economic and social development become better understood. Much of population information is essentially demographic. Policy makers and planners at all levels need data on population size and distribution, age structure, fertility and mortality and projections of these and other indicators into the future. The national infrastructure - houses, communications, transport, water supply, health services, schools, job opportunities etc. - is highly dependent on this knowledge.

At the heart of population information is the demographic data gathered and published by the United Nations Population Division, national statistical offices and demographic research centres. These include basic data

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from censuses, surveys, vital registration systems, family planning statistics and the research findings which constitute the body of scientific and technical knowledge required to understand population phenomena. Global, regional and national rates of population growth, patterns of fertility, mortality, age distribution, spatial distribution, contraceptive prevalence and a range of other factors are monitored annually and projected into the future. The contribution of UNFPA, IPPF and other organisations engaged in population information activities has been to present these data in ways meaningful to busy government leaders and other important audiences and to interpret them in terms of the need for family planning programmes.

Since 'population' embraces an extremely complex, occasionally controversial, set of issues in a dynamic process of change, approaches to the subject have inevitably followed divergent paths. Two centuries after Malthus, population theories and pronouncements abound, as illustrated by Paul Ehrlich's *The Population Bomb* (1968), *The Limits of Growth* report to the Club of Rome (1972), Julian Simons' *The Ultimate Resource* (1981) and many others. Ehrlich's book was intended to shock and he was not alone in this approach. In the 1960s shock treatment was thought by many pundits to be essential to awaken closed minds to the phenomenon of the exponential growth of human numbers. The cure for the 'population explosion' was widely prescribed as 'population control', with consequent burgeoning of the literature arguing for and against this case.

Social and economic developments change population perceptions and provide new ground for debate. The Green Revolution, for instance, opened up afresh the deliberations on the relationship of population growth to food security and agrarian reform. Alarm over the deteriorating global environment and the interaction between human needs and human numbers fuels the debate over cause and effect, as do sensitive questions of where the real blame lies for Third World poverty. Family planning promotes maternal and child health, but those who do not recognise this oppose it as an interference in the private lives of individuals or contrary to the Will of God. The well-documented high incidence of adolescent pregnancy and childbirth arouses emotions and legitimate concerns about the social mores and behaviour of today's youth. The chequered history of some methods of contraception and their administration has sometimes called into question the quality of family planning services. The broad canvas of population information is liberally sprinkled with misinformation and misconceptions which are difficult to eradicate but which must be addressed by reliable and convincing argument.

Population information, therefore, is potentially a theoretical and semantic minefield. Fortunately, however, the growing sophistication of information-gathering and data analysis has allowed increasing numbers of thoughtful commentators to present the facts in balanced and well-informed books, articles, speeches and broadcast documentaries.

Expanding information base

Before the United Nations entered the population field, many private, non-governmental organisations, both national and international, gathered and disseminated a great deal of information, producing popular versions of the dry data of statistical bodies and pointing to the warning signals emerging from them. These efforts helped to change government policies and bring about the international consensus which led to the creation of the UN Population Fund. They also stimulated the development of population teaching and research programmes in academic institutions in the United States and, to a lesser extent, in Europe, thus increasing the knowledge base for work in this field.

As knowledge of population phenomena has become more profound and comprehensive, the trend has been toward a more thoughtful discussion of sensitive indicators like infant and maternal mortality, the condition of women, nutritional status, education and employment opportunities, housing and environmental impact. The notion of a global 'explosion' of people has given way to country- and community-specific considerations that recognise the differences between countries experiencing rapid population growth and those worrying about the decline and consequent ageing of their populations. The very absence of population growth in some industrialised countries can create public apathy about population problems elsewhere in the world, thus underscoring the importance of sustained information on contemporary population changes and their implications.

The field research of certain non-governmental organisations, notably the Population Council, made an early contribution to the revelation of the unmet need for contraception, while the pioneer work of IPPF showed that people who were offered information and supplies tended to take advantage of them. Such information, culminating in the World Fertility Survey, gave new evidence of the relevance of family planning to family well-being and the human right to control fertility. The promotion by the World Health Organization of the importance of family planning for maternal and child health, with statistical evidence to prove it, has added a further body of knowledge.

As more and more women accepted family planning and took up the new generation of methods of fertility control, studies on the safety, effectiveness and acceptability of contraceptive options provided yet another dimension to the expanding information scenario. Because of its potential to arouse human, and therefore media, interest, this was, and still is, a significant aspect of population information programmes, where continuous monitoring, accuracy and reliability are vital. The publications of WHO and the major research institutes, together with the findings and recommendations of drug regulatory bodies, have made important contributions to this sector of population information. Experiences with different approaches to the provision of contraceptive services have also enriched the information base.

Exchange of experience

A growth area in population information of special importance for IPPF has been the accumulated experience of how to design and implement family planning programmes. Many organisations concentrate on these problems and the reports of conferences, seminars and workshops have filled the shelves of population libraries and information centres. Today, there is a wealth of experience and expertise available to government planners and great efforts are made to get the information into the hands of programme managers through training programmes. Approaches to programme development tried in one country have proved replicable in others. This aspect of population information - the exchange of experience - has been a valuable shortcut to progress.

Global, regional and national conferences have played an important part in creating awareness of population issues. IPPF has been active since its foundation in bringing together demographers, health practitioners and development planners to exchange ideas and gain knowledge and confidence. Proceedings of these conferences form an important part of the population literature and provide evidence of the steady growth in knowledge and understanding. The big international conferences organised by the United Nations make news and are important means of disseminating information to a wider public. Special events such as media awards and the United Nations Population Award have a similar effect. A significant initiative in the 1970s was the development of the Parliamentary movements for population and development. These are catalysts whose debates and recommendations have added to the body of population information and helped to communicate it.

One of the most striking features of population information activities in the past three decades has been the proliferation of periodicals and occasional publications. In the 1960s and 1970s, the printed word was the principal means of communicating population information and it remains the predominant medium today. Some publications are intended mainly for the scientific and academic community and library reference. Others are mass produced to feed into education and communication programmes. Most of the leading organisations in the population field have regular publications. IPPF's publications are widely read and admired. *People* magazine (now superseded by *People & the Planet*), in addition to its authentic Third World reporting, has stimulated journalists in developing countries to investigate and describe population and family planning issues in their own countries and to undertake reporting assignments abroad. The Population Reference Bureau in Washington provides an invaluable information service to population and family planning programmes.

Information networks

If the above partial description of the growth in population information activities indicates a veritable information explosion, the same can be said about the resource bases that have developed and spread around the world to collect and manage the data on which such activities depend. One of the most important recent developments in population information services has been the growth of networks which vastly expand the amount of information at the disposal of users. The International Population Information Network (POPIN), established in 1981, is a decentralised network of libraries, clearing houses and documentation and information centres with a co-ordinating unit accommodated in the United Nations Population Division.

The IPPF Library in London houses one of the most comprehensive and important collections of population literature in Europe, enriched by its unique collection of publications issued by all the member Family Planning Associations. The Library is intended to serve the IPPF member organisations in more than 130 countries and provide a resource to individuals and organisations who can contribute to population information dissemination in useful ways. It publishes an acquisitions bulletin under the title *IPPF Co-operative Information Service (ICIS).* Recently it has established a comprehensive audio-visual resource centre which houses videos in different formats from around the world, including many made by Family Planning Associations.

IPPF is on-line to POPLINE, an important international bibliographic retrieval service maintained jointly by the Population Information Program of Johns Hopkins University, the Centre for Population and Family Health at Columbia University and Population Index. POPLINE contains citations and abstracts covering the biomedical and social science literature on family planning and population from around the world. It provides document delivery and free searches to developing countries and is available on-line through the MEDLARS system of the United States National Library of Medicine. POPLINE provides a regularly updated disk of the literature it holds.

The establishment of small libraries and documentation centres specialising in population information is now accepted as essential for the support of population information programmes and the formulation and implementation of population policies and family planning programmes. Some of these centres support a demographic training or research unit within a larger context, such as a ministry, university or UN specialised agency. Others have specific sectoral limits intended to support, for example, population education in schools, family planning programmes or national statistical data management. In recent years there has been a rapid growth in the establishment of national and regional population information centres to act as focal points to support other information activities. These centres collect, organise and disseminate scientific and technical information and 're-package' it for specific audiences, particularly policy-makers, programme planners and managers.

Private institutions and non-governmental organisations have been active for many years in the development of population information centres and have provided methodological models for others to use. This is particularly so in the United States, where information centres have been established to support the population teaching and research programmes at major universities. The highly trained information specialists at senior level in these programmes, a cadre which does not really exist to any extent in other parts of the world, have made important contributions to raising the profile of information work; some of them have acted as consultants to developing countries in recent years. It was a small group of these specialists who founded the

Association for Population/Family Planning Libraries and Information Centres (APLIC) in 1968. APLIC provides a forum for addressing problems faced by population librarians and information specialists and has attracted a growing international membership.

Population libraries - new developments

The tremendous growth in interest and importance of information on population and related development issues has created a large body of literature for which conventional systems of classification have been found inadequate. The cataloguing and classification of population information has been influenced by the practices in American universities with large population programmes. At first the universal classification schemes were adapted to the specialised needs of the population field, but as the breadth and complexity of the subject grew, the need for a special language and smaller, more dedicated and manageable classification systems became apparent, especially with the advent of computer technology. Anticipating computerisation, IPPF developed its own classification scheme, published in 1975, and many Family Planning Associations, as well as the Centre for African Family Studies in Nairobi, use this scheme or adaptations of it.

The vocabulary for population information is set out in the Population Multilingual Thesaurus developed by the Committee for International Co-operation in National Research in Demography (CICRED), published in English, French and Spanish under the auspices of POPIN with financial assistance from UNFPA. POPIN has published a Guide to the Selection of a Classification Scheme for Population Information Centres. A POPIN Working Group was established to manage further development and revision of the Thesaurus.

Many population library catalogues are now held on micro-computers, using various specially designed software packages. UNESCO introduced the Micro-ISIS bibliographic software for use in developing countries. There are also a number of commercial packages suitable for these applications. Training programmes have been introduced to prepare librarians and documentalists to manage these systems. Computerised databases are facilitating the process of networking and can be expected to lead to increased standardisation and ease of communication.

Computer modelling

Finally, a fairly recent innovation in the population information field is computer modelling, used to promote understanding and awareness of population issues. The Futures Group in the United States has developed a system of presentations called RAPID which is credited with influencing political leaders in several countries to recognise the effects of rapid rates of population growth on their development prospects and natural resource base. Such systems are also in place in a number of academic institutions where future population programme managers are trained.

IUCN, the World Conservation Union, is developing computer models relating population changes to environmental degradation. The lesson to be learned from this experience is that if population/family planning organisations lose their disciplined grip on this rapidly changing information scene, policies and programmes will suffer accordingly.

Sex and conception

It is estimated that the sexual act is performed more than 100 million times a day. This results in 910,000 conceptions 50 per cent of which are unplanned, and 356,000 sexually transmitted diseases.

Source: World Health Organisation - Biennial Report 1990-91

Role of ILO in promoting family welfare, its impact and strategies for the future

Dr. Elias G. Mabere

The International Labour Organization (ILO) was established in 1919 as an autonomous institution associated with the League of Nations, and with its primary concern and responsibility being the promotion of better working and living conditions of working men and women everywhere. It became the first specialised agency to be associated with the United Nations. As part of its activities, the ILO has also been promoting a variety of policies and programmes, several of which are addressed to and are relevant to different facets of the population problem.

The problem of rapid population growth is most severely felt in Asia. It was, therefore, natural that its Asian constituents took the initiative in urging the ILO to undertake activities in the area of population. The Governing Body of the ILO in its session in November 1968 laid down the lines of action "to induce and help developing countries to moderate their rate of population growth in appropriate cases."

It was in the same year (1968) that the worldwide alarm and concern over the possible consequences of rapid population growth led to the establishment of the United Nations Population Fund. This made it possible for the ILO and other international agencies in the United Nations family to engage themselves in population and family planning programmes within their respective spheres of competence and jurisdiction. The ILO's tripartite structure, which provides representation of the governments, workers and employers in its policy-making organs, makes it specially effective in the promotion of population and family planning education and services in the sector comprised by its tripartite constituents.

The important goals of ILO's education and welfare programmes have been: to support the national policies and programmes for population moderation and family welfare; to encourage the acceptance of an enlightened concept of labour welfare to include workers' family welfare and thus contribute to the enhancement of the quality of life of workers and their families; to promote harmonisation between the labour policy, legislation and practices and the country's population policies; to introduce/integrate components of population/family welfare education in the curricula of various educational and training programmes, and to encourage institutionalisation of the above programmes and activities.

The organised sector was selected as the "entry point" by the ILO Governing Body probably for the reason that, it would benefit from the well-developed tripartite approach and co-operation which already existed amongst the ILO's constituents.

Population /family welfare activities

The ILO population education activities, started in the early 1970's, contribute directly to the larger concept of labour welfare. These are designed to introduce and institutionalise

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population concerns in work-related education, welfare and health services, and conversely to provide for a labour component in national population programmes.

More than 60 family welfare education projects in 36 countries have been/are being implemented by the ILO. The majority of projects in industry and plantations are organised on a tripartite basis.

Several Asian countries have set up institutional arrangements to provide systematic support to these activities. Numerous projects have also been successfully running in Africa and the Middle-East with substantial government inputs.

IEC activities, being a core component of the population education sub-programme, receive special attention particularly with respect to the development of innovative training material for use in courses designed to strengthen local capacity in the preparation and use of IEC materials.

Population activities in the Asian Region fall within the competence of ILO's erstwhile Labour and Population Team for Asia and the Pacific (LAPTAP) which has executed 20 projects in India over a decade and half with the assistance of the UN Population Fund; five projects are presently operational at different stages of implementation. Most of these projects are tripartite collaboration and participative efforts involving labour administrations, workers' organisations or individual employers.

The thrust of these projects has been on actively promoting and providing technical support and family welfare programmes in the work setting of the different organisations. This served two purposes. Firstly, these programmes have helped to improve the quality of life of the worker and reflect the prevailing consensus that family welfare forms an integral part of a broad and enlightened concept of labour welfare. Secondly, they have acted as pace-setters for policies and programmes designed to moderate population growth which constitutes a vital element in the development strategy of the country. By and large, these projects have been innovative in nature, experimenting with various approaches and deciding the effectiveness of different types of implementation agencies.

Beyond the organised sector

Although the main thrust of ILO's population education and family welfare activities still remains on the organised sector, ILO is gradually extending its activities in the urban, informal, semi-organised and unorganised sectors in pursuance of the Government's priority attached to these sectors in order to have maximum coverage of the population. Four of the five on-going projects of ILO which are located in urban slums, semi-organised and unorganised sectors involving working women in Madras, a tribal population and milk producers in Gujarat, and *Beedi* workers in the States of Uttar Pradesh, Madhya Pradesh, Orissa and West Bengal are steps in this direction.

Following up on the experience gathered, it was realised that only a small fraction of the vast potential of the organised sector has been exploited. In view of this, the Ministry of Health and Family Welfare invited ILO/LAPTAP in May 1987 to undertake a study for developing a comprehensive plan of action on family welfare within and beyond the organised sector.

The study thus undertaken covered the various segments of the organised sector viz. the government sector, public sector, labour welfare funds and agencies, private sector and plantations. It also studied the potentiality of co-operative segments in the field of family welfare. In addition, semi-organised sectors and poverty groups were also brought within the scope of the study.

The study proposes steps and measures for promoting the systematic involvement of the institutions of the organised sector in the family welfare programme and for sharpening their fertility impact.

In the co-operative sector, after a preparatory phase, pilot projects are envisaged in a few selected segments; in the semi-organised sector, further exploration and preparation indepth has been suggested in selected hitherto uncharted areas, in the light of which a few experimental projects of limited scope could emerge.

Impact of programmes in the organised sector

ILO-UNFPA population/family welfare programmes have inter-alia achieved the following results:

- Created awareness among the ILO's tripartite constituents about the need for a family planning programme in the organised sector as a means to ensure the welfare of the workers, and improve their quality of life.
- Helped in institutionalising family welfare education and service activities as a part of labour welfare activities.
- Helped in the production of a large number of need-based IEC materials such as posters, flip charts, flip books, handouts, manuals, guidebooks, slides etc. through different UNFPA assisted ILO-executed projects for motivation and education.
- Helped in the integration of population/family welfare education components in the curricula of various on-going educational/training programmes of various agencies.
- Adoption of family welfare programmes as a comprehensive package of primary health. maternal and child health care, immunisation, nutrition and family planning in conjunction with income generation activities and women's development.

Future directions/strategies

The long-term objective of the ILO's overall population and family welfare education programme remains unchanged, that is, to harness all available medical, welfare, educational and other infrastructure in work-related institutions for providing family planning information and services as part of a package of labour welfare. This is considered the main strength of the ILO programme.

Within these parameters, in all major countries of Asia, there is now a consensus amongst the ILO constituents, that is, the Ministry of Labour, the employers' and the workers' organisations, that workers' welfare should include family welfare, and family welfare, in turn, includes family size as a crucial consideration. The objective of establishing a completely self-sufficient programme providing family planning education, motivation and services to all workers through work-related channels still remains a long-term goal, just as the ILO's principal goal of providing other basic labour welfare services at all places of work, itself remains a long-term objective.

Based on the recommendations of the Study Report and guidelines given by the Government, the future directions/strategies of ILO's UNFPA-supported population/family welfare programme in India would be as follows:

- ILO should be involved in the organised sector programme till such time as family welfare activities are institutionalised as an integral part of the labour welfare activities.
- Strengthening and expansion of family welfare programme though Government and public sector organisations by providing technical assistance.
- Developing and taking up programmes for more active involvement of national trade unions in family welfare programmes.
- Extension of geographic coverage or countrywide replication of successful pilot projects.
- Adoption and extension of community outreach programme by large industrial enterprises.
- Promotion of family welfare through: (1) dairy co-operatives; (2) fishermen's co-operatives; (3) sugar factory co-operatives; (4) spinning mills co-operatives, and (5) khadi and village industries.
- Development of family welfare and income generation programmes for women, poverty groups.
- Involvement of viable and selected rural workers'organisations in the family welfare programme.
- Developing policy options for intervention in dealing with trends and effects of migration on fertility behaviour and influencing Government policies on integration of demographic variables with development planning.

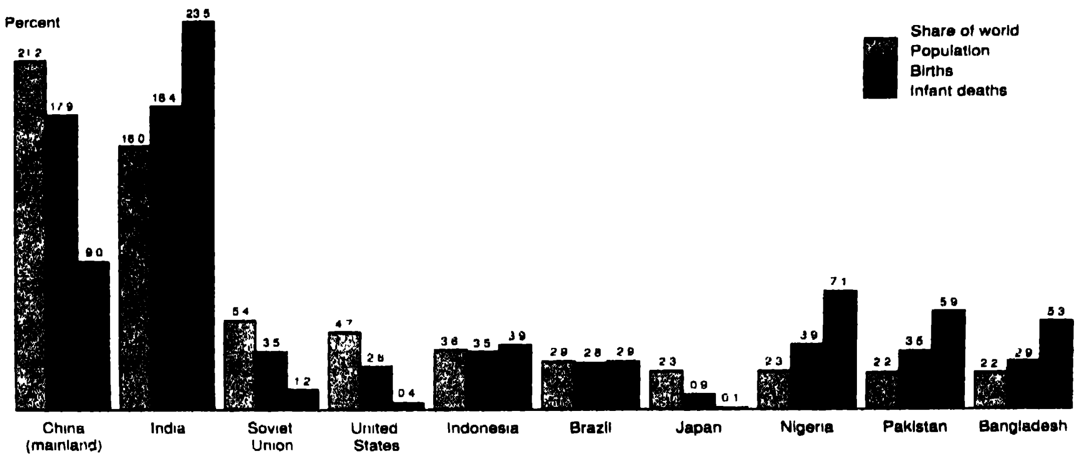
UNFPA successor arrangements and Technical Support Services

UNFPA has taken decisions of far-reaching importance in respect of the execution of national projects, provision of technical services, and other related matters which will come into full effect from January 1993.

An "Inter-agency Task Force on Successor Arrangements for Agency Support Costs" comprising UNFPA and five major executing agencies viz. UN, ILO, UNESCO, FAO and WHO has been set up to guide and monitor the new system and act as the major means of co-ordination among all concerned agencies.

As from July 1992, LAPTAP has ceased to exist. Instead, an inter-agency country programme Technical Support Service team (TSS) has been set up in Kathmandu to cater to the needs of the South Asian countries including India. ILO will however continue to be the executing agency for the five on-going UNFPA-funded projects.

The primary purpose of the country programme technical support team will be to provide countries in accordance with the UNFPA's and UN agency mandates with high quality technical support services to meet country needs leading towards national self-reliance in the population field.



Share of world population, births, and infant deaths for 10 largest countries : 1991

Source World Populr' n Profile 1991 US Bureau of the Census 1991

Saving lives

In the last 24 hours, 40,000 children have died. One out of five infant deaths in developing countries (two million a year) could be saved if all births were spaced by at least two years.

Half a million women die every year from pregnancy-related causes. The risks of death from pregnancy-related causes vary geographically:

1 in 25 in Africa	1 in 38 in Asia
1 in 90 in Latin America	1 in 870 in East Asia

1 in 1,750 in developed countries

- **Family planning could save the lives of between 25 and 50 per cent of these women, by reducing the number of high-risk pregnancies-those that occur too early or too late in life, or too frequently.**
- **Family planning could also save the lives of the 200,000 women who die every year from unsafe, illegal abortion.**

Source: World Health Organization - Biennial Report 1990-91)

The International Planned Parenthood Federation is the largest non-governmental organisation in the world concerned with family planning. Its volunteers, who often carry on their own professions, bring commitment and compassion as also experience and expertise to the development and organisation of family planning programmes. They willingly give their time and effort without charge as honorary officers of their respective Associations or as part of the regional/international volunteer structure, and/or to specific activities of their Associations by virtue of their talents and professional abilities.

In the following pages, we salute four IPPF Patrons who continue to be indomitable champions of planned parenthood: Mrs. Shidzue Kato, now 93, is still active as President of the Family Planning Federation of Japan; Mrs. Constance Goh Kok Kee is a Patron of the IPPF East & South East Asia and Oceania Region and an adviser to the Family Planning Association of Singapore; Dr. Thorsten Sjövall, is associated with the Swedish Association, Riksförbundet for Sexuell Upplysning (RFSU) as a Board Member; and Mrs. Avabai B. Wadia continues in active leadership as President of the Family Planning Association of India.

MRS. SHIDZUE KATO

Born to a life of ease in Tokyo, Mrs. Kato was moved at a very young age by the plight of women with too many children in extremely poor living conditions.

In 1920, she met Mrs. Margaret Sanger, the birth control pioneer, in America. This inspired Mrs. Kato to dedicate herself to birth control as a means of liberating women from unwanted pregnancies. In 1937, she opened a birth control counselling centre in Tokyo and devoted time, effort and social standing towards the building of the Japanese family planning movement and in the process, defying social intolerance. That same year, she was arrested along with others on suspicion of espousing "dangerous thoughts". She was forced by the authorities to close her birth control and counselling centre.

The war years interrupted her efforts but the post-war occupying force enlisted her as an unofficial adviser on Women's Affairs. In 1946, she was in the first batch of women who were elected to the Diet, where she served for 25 years. In no small measure, her continuing efforts in population issues and women's welfare contributed to her country's advances along these lines both in pertinent statutes and practice.

She attended the first International Conference on Planned Parenthood in Bombay in 1952 and was elected one of the two Vice-Presidents for the IPPF Western Pacific Region in 1953. In 1954, she helped establish the Family Planning Federation of Japan and became its founding Vice-President. In 1955 she was a leading figure at the IPPF Fifth International Conference on Planned Parenthood at Tokyo.

In 1974, she became President of the Family Planning Federation of Japan. In the same year, she was elected Vice-President of IPPF, cated service as a Parliamentarian, and the First Class Order of the Sacred Treasure.

On its part, the IPPF Members' Assembly in 1977 elected her Patron together with another ESEAOR pioneer, Mrs. Goh Kok Kee.

In 1988, Mrs. Kato was honoured with the UN Population Award. Owing to her age she was unable to travel to New York to receive it but her daughter went on her behalf. At a felicitation function in Tokyo where the speakers included Mr. T. Fakuda, a former Prime Minister of Japan, Dr. Nafis Sadik, Executive Director, UNFPA and Mrs. Avabai B. Wadia, IPPF President, she gave an eloquent speech standing at the microphone for 15 minutes even at the age of 92.

Mrs. Kato exemplifies the zeal and dedication of a volunteer who is convinced of the importance of a cause spanning three generations.

Source: Pioneer Volunteers IPPF-ESEAOR - A Tribute, IPPF-ESEAOR

MRS. CONSTANCE GOH KOK KEE

Mrs. Constance Goh Kok Kee is a founding member of the Singapore Family Planning Association, which was inaugurated in June 1949 with Dr. Goh Kok Kee's office as its first clinic.

The evolution and development of family planning activity in Malaya, Sabah and Sarawak occurred almost in tandem with that of Singapore as Mrs. Goh and her volunteer colleagues paid visits to these areas, establishing contacts and assisting workers with family planning literature and other supplies.

Mrs. Goh was Honorary Secretary/Regional Chairman of the Far East and Australasian Region from 1959 to 1969. Hampered continually by lack of funds, Mrs. Goh accommodated the secretariat in her own home during that period.

Together with Mrs. Dorothy Brush, the Honorary Field Work Adviser, she visited the different states in Malaya in 1959 followed by a visit to Borneo and Sarawak with Mrs. Celeste Amstutz, where they established clinics.

In 1961, Mrs. Goh and Mrs. Amstutz visited Rangoon, where an Association had been formed. Contacts were also made with Cambodia, Vietnam and Laos. Doctors and nurses from neighbouring countries in the Region were sent to Singapore for training in family planning methods and sterilisation, and went home with supplies and teaching aids.

As Chairman of the East and South East Asia and Oceania Region (ESEAOR), Mrs. Goh welcomed 350 delegates and observers from 42 countries to the Seventh IPPF Conference held in February 1963 in Singapore. This ambitious project was the culmination of the efforts of Mrs. Goh, Mrs. Amstutz, Mrs. Vera Houghton and Mrs. Margery Butcher.

The shortage of skilled workers remained acute although the SEAOR Training Institute was established in 1965. Mrs. Goh took steps to remedy this situation. Dr. Sushila Gore, who was the Medical Officer In-Charge of the Government Training Centre in Bombay was asked and accepted the task of heading the Training Centre; she also travelled extensively in the Region along with a team at times, and trained doctors and other personnel *in situ*. The Training Centre was taken over by the Singapore Government later but meanwhile large numbers of people in the Region had been trained by this means. Mrs. Goh also called for the provision of information and education materials in the local languages of the countries in the Region.

At the 1977 IPPF Members' Assembly, Mrs. Goh was elected Patron of IPPF, together with another pioneer, Mrs. Shidzue Kato. She is also Patron of the ESEAO Region.

A Justice of the Peace, Mrs. Goh, while currently retired from active participation is still an adviser to the Family Planning Association of Singapore.

Source: Pioneer Volunteers IPPF-ESEAOR - A Tribute, IPPF-ESEAOR

DR. THORSTEN SJÖVALL

Dr. Thorsten Sjövall who was honoured as Patron at the Members' Assembly in Ottawa in 1989 has made significant contributions to the promotion of education in sexuality and family planning, particularly in his country of Sweden.

Born in Halsingborg, he had his Med Lic Uppsala in 1940 and held various medical appointments for the next seven years including an inspectorship of mental, child and youth care at the National Board of Health.

He went to Boston, USA for two years in 1952 for various studies and specialist qualifications in mental and nervous disorders and psycho-analysis. By 1968 to 1980 he was the Head Physician of the Mental Health Bureau at Stockholm and psychiatric doctor at St. Eriks Hospital.

He was the Founder of the Swedish Association for Group Therapy and its Chairman from 1962-66, and Chairman of the Swedish Psycho-analytical Association from 1963-67.

Apart from his professional work as a psycho-analyst, Dr. Sjövall was very active in the promotion of sexual health and family planning in Sweden. He was closely associated with the Swedish Association, Riksförbundet for Sexuell Upplysning (RFSU) and provided great support to Mrs. Elise Ottesen Jensen in the work that she was carrying on in the interests of family planning, family life education and as President of the International Planned Parenthood Federation at a later date.

Dr. Sjövall's close association with the IPPF began when he attended the 1953 International Conference on Planned Parenthood in Stockholm. He also visited various countries including India. In Bombay he took part in one of the first Scientific Seminars to be organised on Contraceptive Technology which was held by the Family Planning Association of India. His interest in the work carried on in India was very close and his view that sexual education should be promoted in order to give a proper backing to the family planning programme, was expressed in many speeches.

As a Member of the Medical Committee of IPPF, Dr. Sjövall contributed to a deeper understanding of sexual health and the motivation of individuals to adopt family planning. From 1964 to 1972 he was Chairman of the RFSU and continued as a Board Member thereafter. He was also a member of the Medical Committee of IPPF and its Central Executive Committee, and was President of the IPPF Europe Region from 1972-74. Dr. Sjövall is not a person who sought the limelight but in his own quiet way his contributions have been of great significance in advancing knowledge and understanding of topics which are closely linked to the mental and sexual health of people.

MRS. AVABAI B. WADIA

Smt. Avabai B. Wadia is a Barrister-at-Law and an Honours LL.B. of London University. She practised law for a few years in England and in Sri Lanka till she made her permanent home in India. Since then, she has devoted herself full time to voluntary service for women's rights, social welfare, family planning and allied subjects. Her involvement in activities for the status of women started from her early student days when she was the youngest member of the London Committee of the Women's Indian Association (which later became part of the All India Women's Conference) and was also associated with some British women's organisations. This early training, as well as her legal background, stood her in good stead in the active role she played in the All India Women's Conference from 1945 onwards, as also in other organisations. She was a J P and Hon Magistrate and served for some years on the Bench of the Juvenile Court in Bombay.

Smt. Wadia was a Founder Member of the Family Planning Association of India in 1949, and of the International Planned Parenthood Federation in 1952. Over the years, she has worked untiringly and contributed significantly in evolving policies and programmes in this vital field, both nationally and internationally. The FPA of India under her Presidentship since 1963 has greatly expanded and broadened its scope. She has been responsible for initiating several innovative programmes like Population and Family Life Education and youth concerns, integrated projects in rural areas, women's development, etc. She also serves on several Government bodies.

Since 1983, as the President of the International Planned Parenthood Federation, working in 134 countries, she travelled extensively in the course of her work and met FPAs in all the continents and saw their work at first hand. She was unanimously re-elected President for a second term and on retiring in 1989, was made a Patron of IPPF. During the period of her Presidentship the IPPF was given the UN Population Award for 1985 at the United Nations in New York, the Third World Prize in 1987 in Brasilia, and the WHO Medal in 1988 in London, each of which was received by Smt. Wadia on behalf of the Federation.

Mrs. Wadia has received and continues to receive many honours and accolades. The Government of India bestowed the Padma Shri on her in 1971, and the Padma Bhushan in 1981. In 1985, she was presented with the Women of the Year Award by the Zonta Club of Bombay, and last year she was honoured with the Mahila Shiromani Award by the prestigious Shiromani Awards Institute in New Delhi for her "extraordinary and inspiring contribution in her chosen field."

Never one to rest on her laurels, Mrs. Wadia remains the driving force of FPAI. After spending a lifetime in the cause of the status of women and family planning and in nurturing the Association to maturity, she is now actively engaged in an ambitious project to enhance the coverage and impact of voluntary effort in her country by creating a network of NGOs to help them to add elements of family planning to their ongoing programmes.

ARAB WORLD REGION

Member Associations:

Afghanistan
Algeria
Bahrain
Egypt
Iraq
Jordan (East)
Jordan (West Bank)
Lebanon
Mauritania
Morocco
Somalia
Sudan
Syria
Tunisia
Yemen

In this Region of the IPPF, only a minority - people of high social status, the educated and those living in well-served urban areas - has access to family planning. This is true even in countries where family planning is part of government health programmes. Overall, barely a third of the women in their childbearing years practice contraception; another third would wish to have access to it. In addition, their status is low and with a fifth marrying between the ages of 15-19, the Region has high adolescent pregnancy rates.

At present, the governments of 11 of the 15 countries where a FPA exists have

Service Delivery

- In July 1991 the first family planning clinic was established in Mauritania, one of the poorest countries of the world.
- In the West Bank, the FPA which is the main source of services, works with relief agencies to add family planning to their programmes. The National Red Crescent, acting as a ministry of health for the Occupied Territories, is developing a national health plan and the FPA is closely involved in integrating family planning into primary care.
- The Moroccan FPA takes family planning information and services to remote rural areas through mobile teams, making use of individuals and organisations, including private nurses and midwives, rural stores and Red Crescent centres. In addition to providing family planning, the community centres aim to improve the overall quality of life by training local distributors in health, nutrition, sanitation, and literacy programmes.

▲ A young mother who has spaced the births of her two children comes to one of the clinics of the Egyptian FPA.

Working with Youth: FPAs in this Region work hard to change the reluctance in some official quarters to look at sexuality outside the context of marriage and family relationships.

▲ A family planning worker explains the benefits of contraception to the men and boys of a village near Fez, Morocco.

- The Tunisian FPA, with its Centre for Youth, is a pioneer in this area, and the FPAs of Algeria, Syria and Egypt also conduct educational activities for young people.
- The Lebanon FPA lobbies at official and academic levels for greater commitment to youth causes. Every year, under the youth banner, it brings together many of the country's youth-serving organisations, leaders and volunteers, and mobilises young

responded in terms of having a national family planning programme; only three (Morocco, Egypt, Tunisia) have explicit population policies in favour of family planning.

Most FPAs see the provision of information and education and advocacy to create a favourable climate for family planning as important as increasing accessibility and quality care particularly for disadvantaged groups. Other key objectives include women's development and programmes for young people who make up more than half of most Arab populations, with a focus on the special needs of adolescent mothers.

people to carry out various community activities.

Focus on Women

- A Regional Women's Committee set up by the IPPF Arab Regional Council is involved in investigating poor levels of participation of women in Association programmes. A study of barriers to participation conducted by the Tunisian FPA is being reviewed. Similar studies are planned in Syria and Yemen.

▲ Women using a knitting machine at the Syrian FPA

FPAs in Egypt, Lebanon, Morocco, Sudan, Syria and Yemen offer programmes where in addition to literacy, health education and family planning services, women can receive training in home economics, handicrafts and food production.

Co-operation

- Last year, IPPF representatives visited influential political leaders in several countries with member FPAs thereby strengthening the spirit of collaboration; UNFPA and other agencies were also involved.

A technical meeting on quality of care, a Regional initiative, held early this year, will be followed by various national activities including training and motivating policy-makers and providers to use or adapt IPPF guidelines.

The Region has won significant support from the European Community. This will mean increased resources which will enable it to improve, intensify and expand its programmes focussing on women and youth.

Yemen's first National Population Policy Conference held in October 1991, mapped out strategies and objectives for health and family planning until 2010 A.D. Following the conference, the Yemeni FPA, a major provider of family planning services, has also begun to expand both on its own and in collaboration with the Ministry of Health.

POPULATION PROFILE

Population estimate mid-1992 (millions)	**221.5**
Percentage rate of natural increase	**2.8**
Infant mortality rate (per 1000 live births)	**81.2**
Total fertility rate	**5.5**
Percentage population under 15 years	**43.7**
Percentage married women using contraception*	**32.2**
Per capita GNP in (1990)*	

The values are weighted averages.
*Excludes any country for which figures were not currently available

Women's development and family planning: The virtuous circle

Ms. Joan Swingler and Ms. Nancy Fee

The family planning pioneers - and the links between women's emancipation and family planning

This special issue of *The Journal of Family Welfare* commemorates the founding of the International Planned Parenthood Federation (IPPF) forty years ago, in Bombay. Such an anniversary is a good opportunity to reflect upon some of the motivations of the IPPF founders, to assess what has and has not been achieved since 1952, and to consider whether we are worthy successors to their legacy.

In 1952 open discussion of birth control was a challenge. The IPPF founders were pioneers, in the most genuine sense of the word. In establishing national family planning associations and IPPF, these pioneers were determined that women should have access to information and methods to control their fertility and to plan their families. Promoting family planning methods meant providing frank information on sexuality and reproduction, and that meant challenging the accepted unequal position of women in societies - radical ideas in the early 1950s.

It was no accident that many of the pioneers of family planning were women. They recognised the key role of family planning in enabling women to choose when and whether to have children - and to have a life that was not determined by their fertility. While these dynamic pioneers were aware of the implications of excessive population growth, they were motivated primarily by the need to protect women's health, to promote their emancipation, and to enable parents to limit the size of their families.

Promoting the links between family planning and women's development

The 1960s and 1970s saw increasing efforts by IPPF and others to promote family planning and to link family planning openly with the health, rights and development of women. The case for the relationship between women's status and family planning was examined and documented through consultations, conferences, council resolutions and decisions at all levels of IPPF's growing network. This research and advocacy made major contributions to the acceptance of family planning education and services at national and international levels.

In many countries, such efforts resulted in the legalisation of family planning, and enabled married women to use contraception with or without the agreement of their husbands.

From the early 1960's, IPPF's work at the national, regional and international levels made an important contribution to the recognition of family planning as a human right, and to the linkage between women's status and access to family planning. A key supporter of family planning on the UN Commission on the Status of Women in the 1960s and 1970s was Aziza Hussein. A founder member of the Egyptian Family Planning

Ms. Joan Swingler is the former Executive Secretary, IPPF (1962-1986); and Ms. Nancy Fee is former Programme Adviser, Women's Development, IPPF (1978-1988).

Association, she served as Egypt's representative on this Commission for many years, and was prominently involved in the Commission's landmark *Study on the Interrelationship of the Status of Women and Family Planning* from its beginning in 1968 to its completion in 1973. Similarly, other leading IPPF volunteers worked at the national and international levels to ensure governmental support for the inclusion of family planning as a human right in the 1968 UN Declaration on Human Rights. This was the first UN declaration to recognise family planning as a human right.

Following this declaration, IPPF continued to work for the recognition of family planning as an integral part of women's rights and development. Further work by the UN Commission on the Status of Women resulted in the UN Convention on the Elimination of All Forms of Discrimination Against Women (1979), which called upon all governments to take:

> **"....all appropriate measures to eliminate discrimination against women, in order to ensure, on the basis of equality of men and women, the same rights to decide freely and responsibly on the number and spacing of their children and to have access to the information, education and means to exercise these rights."**

Subsequently, most major international conferences and conventions endorsed these recommendations including the 1974 World Population Plan of Action adopted in Bucharest; the 1975 International Women's Year Plan of Action, Mexico; the Alma Ata Declaration on Primary Health Care in 1978, and the 1980 and 1985 UN Women's Decade Conferences.

How did IPPF, and other sympathetic organisations succeed in their advocacy of the recognition of family planning as an integral part of women's equality and status, and as a human right? IPPF was one of the organisations questioning the low status of women; the integral contribution of family planning to women's health and equality was an obvious component of women's emancipation.

Additionally, FPA and IPPF volunteers and secretariats worked to inform, educate and lobby on these issues to national governments, and within the UN system. IPPF was an international leader in this work during these decades, and was a key element in the wider acceptance of family planning as a human right.

The Planned Parenthood and Women's Development Programme (PPWD)

In the early and mid-1970's, development programmes were emphasising integrated development efforts. Within IPPF, there was an increasing emphasis on the integration of family planning education and services into wider development programmes and more active consultations with communities. Such efforts were about gaining acceptance for family planning, and also ensuring that programmes were based upon local priorities, as identified by the people themselves.

These concerns, along with IPPF's commitment to the links between family planning and women's status, were key elements in the development of the "Planned Parenthood and Women's Development" (PPWD) programme. Established in 1976, the programme was based on a number of assumptions, namely:

* that women were unlikely to accept the relevance of family planning to their own and their families' well-being if they lacked the basic necessities of life;
* that projects which initially concentrated on women's development activities would help women to define and determine their own needs;
* that women, by working together to meet their own needs, would begin to exert more control over their lives and to understand that birth spacing and family planning would play a prominent part in that process; and
* that all were integral to women's emancipation.

The PPWD programme was an innovative approach to project development and implementation, and became an important pioneer of integrated strategies within IPPF. The PPWD programme emphasised small-scale, integrated development efforts and, in line with IPPF's federal structure, the detailed objectives for projects were determined by local communities and FPAs.

The response to the programme was positive. In many countries, FPAs and other non-governmental organisations saw how appropriate it was to integrate development and family planning activities, especially when aiming to meet some of the basic needs of the poor communities. Again, the premise of the programme - that women needed to be assured of their children's survival and family welfare, and to gain some control over their lives before family planning was seen as relevant - struck a chord with FPAs and many NGOs.

Within three years of the establishment of PPWD, projects were under way in over forty countries. Aiming to improve women's lives in a practical sense, they focussed on income-generation, kitchen gardening, animal rearing, vocational training, water, sanitation, health and literacy. Other activities included workshops to promote family planning and family life education by women's organisations, as well as studies of women's rights and development.

PPWD projects were small-scale, and few projects initially required more than $10,000 a year. During 1976-80, about sixty per cent of the projects were undertaken by FPAs, and forty per cent by other NGOs.

By the mid-1980s, over 150 PPWD projects had been initiated and the programme had attracted considerable international attention, and funding support from IPPF's donors.

PPWD has been one of the most extensively assessed of IPPF's programmes. From 1976 to the early 1990s, it was regularly reviewed at regional and international levels, and was documented through case studies, publications, and reports to volunteer committees and donor organisations. Individual projects were reviewed by FPAs, and as part of IPPF's "Overall Programme Evaluations" of FPAs. IPPF's Evaluation and Management Audit Department evaluated the programme in 1985-1986, and in 1989 the Programme Department reviewed projects in Ghana, Mali and Zambia.

PPWD: What have we learned?

Since 1976, a number of positive results have been reported in the evaluations and programme reviews noted above:

- *Reaching poor communities:* The majority of PPWD projects were undertaken in poorer areas, where project participants, community leaders and FPAs have consistently supported PPWD's integrated development approach and were thus able to demonstrate a commitment to the well-being of individuals, couples and families. In Kenya for example, the FPA was able to build upon the PPWD project in Mathare Valley to expand integrated family planning activities in urban squatter areas.
- *Long-term FPA commitment:* A major aspect of PPWD was how quickly FPAs adapted the programme to their own organisational priorities. By the early 1980's, FPAs in Asia had incorporated PPWD into their wider strategies, and were providing funding from their regular budgets. Many FPAs in Africa and Asia continued to implement women's development and family planning programmes, many of which were originally undertaken as part of PPWD. In India, PPWD projects continue to be a vital part of the FPA's community programmes, and have enabled many women to make family planning an integral part of their lives. In Pakistan, the FPA similarly continues to undertake PPWD activities as part of its family planning and development projects with poorer rural and urban communities.
- *Integration of family planning in the programmes of other organisations:* In many cases, PPWD provided a welcome mechanism for co-operation with other NGOs. PPWD especially succeeded in reaching women's and community development organisations at national and international levels. For example, IPPF and FPAs worked with international women's organisations to gain recognition of the importance of family planning throughout their networks. The long-term benefits of such recognition should not be underestimated; women's organisations are key supporters whenever family planning services face opposition.

From its establishment, PPWD had a number of critics within IPPF. To a considerable extent, criticism of the programme was related to its original aims:

- *Family planning demand creation vs. service delivery:* During the late 1970s and 1980s, there was discussion within IPPF about the relative priority for family planning service delivery vs. longer-term demand creation, and the need to change gender attitudes. PPWD is based on a "demand-creation" approach, which aims to promote change in attitudes and cultural norms regarding family size. Even so, the programme was often criticised for its failure to attract large numbers of family planning acceptors within a limited time span.
- *The small-scale nature of the programme:* Most projects originally cost $5,000 - $10,000 a year. PPWD was planned as a small project approach - in the belief that such projects would be easier for women's groups, communities and FPAs to manage.
- *The focus on income-generating activities:* Many projects focussed on income-generating activities, in response to local needs in poor communities. However, few FPAs or project participants had the business expertise required to make these projects self-supporting and profitable.
- *Local vs. international decision making:* PPWD emphasised locally determined priorities. Such a "let a hundred flowers bloom" approach, and the small-scale nature of the projects, meant that there was little possibility of comparing project experience. PPWD was an experiment in the promotion of an integrated strategy to FPAs and communities; it was not a testing-out of specific project models.
- *Qualitative vs. quantitative outcomes:* PPWD programme reviews, evaluations and anecdotal evidence often reported changes in attitudes in communities towards family planning, women's education and women's right to speak out and be heard on community issues. Many of these changes could be attributed to PPWD activities. However, it remained difficult to identify quantitative gains in these projects.

Programme designers, decision-makers and evaluators often consider qualitative data as "soft" or less valid or trustworthy than "hard" quantitative data. However, this may be the result of a lack of rigour rather than a valid judgement about what is important in promoting and documenting social change and development.

The projects could also be regarded as a manifestation of democratic consultation and as stimulating and building local infrastructure.

The future: Priority concerns for the 21st century

This article began by noting the motivations of IPPF founders, and questioning whether we are worthy successors to the legacy of the family planning pioneers. As these pioneers recognised, family planning is first and foremost about freeing women from the tyranny of unplanned reproduction - and enabling them to have a life apart from their reproductive role. PPWD has been about recognising this basic fact of life. For women, family planning is not only a health or economic need but is intrinsically linked to all other aspects of their lives. This principle also relates to the truly radical potential of family planning: that by enabling women to control their fertility, family planning changes the nature of the relationship between women and men and the basis on which women continue to be constrained to an unequal status in so many spheres of life throughout the world.

The message of the family planning pioneers is about doing what must be done rather than doing what is safe and acceptable. The programme focussed on reaching women in the poorest rural and urban areas in developing countries. It trusted women and communities to identify their own needs and priorities, and the manner in which family planning should be incorporated into their lives.

Despite the achievements of the past forty years, immense tasks remain for IPPF and others:

- *Young women and family planning services:* In all parts of the world, large numbers of young women become pregnant too early. An estimated forty per cent of all 14 year-old girls alive today will have been pregnant at least once by the time they reach twenty. In some parts of the world this childbearing is within marriage and in others it is largely outside marriage. In either circumstance, adolescent childbearing is likely to be physically and psychologically detrimental for women and infants and almost always limits women's educational and work opportunities. We know that the vast majority of sexually active young women, married or unmarried - developed and developing world alike - do not have effective access to family planning services. Is there really, any responsible alternative to making family life information and family planning services systematically and effectively available to young women and young men?

Abortion: In a desperate bid to control their fertility hundreds of thousands of women resort to illegal and unsafe abortions annually. Nearly 200,000 women die painful deaths from such abortions every year, and it is the most common cause of death for women aged 15-45 in many countries. Obviously, IPPF is working to prevent these tragedies through the effective promotion of family planning services. All the evidence suggests however, that this is not enough - that large numbers of women will seek an abortion, even under the most vile conditions, when faced with an unwanted pregnancy. Perhaps we need also to face this reality with the radicalism of the original family planning pioneers.

* *Women and reproduction:* Throughout the world, the majority of women continue to be defined by their reproductive role. The work and responsibility for child *rearing* is still largely seen as a women's responsibility. And in all countries, women's contribution to society continues to be assessed primarily in light of their reproductive function. We must surely ask why. Despite severe economic imbalances and problems, it is essential to continue to work towards greater value being placed on women's capabilities and their economic contributions to the well-being and better quality of life for all.

The message of the family planning pioneers is that we need to promote universal principles, while respecting local traditions and cultures. We have an obligation to those who fought accepted norms in order to ensure that family planning was recognised as a human right of all women and men. As heirs to this legacy, it is our duty to question norms and customs which cause suffering and injustice. As Mahatma Gandhi once wrote:

> **"We must gladly give up custom that is against reason, justice and religion of the heart. We must not ignorantly cling to bad custom and part with it only when we must, like a miser parting with his ill-gotten hoard out of pressure and expedience."** (Editorial in *Young India*, 9 February 1921).

Unmet need

300 million married women in the reproductive age group (15-44) years want to plan their families, but do not have access to modern methods of contraception. But the figure for unmet quality family planning could be as high as 500 million, if young people are included, along with those who are dissatisfied with current services.

Contraception

A total of 51 per cent of couples (381 million) in developing countries practise family planning. Between the years 1960-65 and 1985-90, the number of contraceptive uesers rose as follows:

South Asia	8 million to 94 million
Africa	2 million to 18 million
East Asia	18 million to 217 million
Latin America	4 million to 44 million
All developing countries	31 million to 381 million

Source: World Health Organization: Biennial Report 1

Current challenges: How FPAI is meeting them

Mrs. Avabai B. Wadia

When FPAI was founded 43 years ago, there were people who thought of it as outrageous in talking in public of intimate matters concerning sex and the birth of children, against the idea that children are the gift of God, the idea that the poor will not understand or use modern medical techniques, or that Indian families cannot adopt new ways.

The small group of voluntary social workers and medical experts who started in a humble way four decades ago were simply "learning by doing". They evidently struck the right moment in time, for their work quickly expanded and attracted attention among diverse groups, and uncovered a real need among families. Now FPAI has grown into a multi-centred, national organisation enjoying public prestige and approval for its family planning and supportive activities.

But real success came after years of effort, with breaking the barrier to the rural poor, when the Association learnt how to build friendships on an equality basis with village dwellers. Today, the largest number of its volunteers, about 90,000 of them, are those who live in more than 2200 villages. They are not only the beneficiaries, but also the conduits and activists for a variety of micro-level developmental activities which show immediate results, and spontaneously extend into health and family planning. In urban and semi - urban areas, its 40 Branches follow the usual democratic set-up of membership, elections, committees, paid staff, and offices. The geographic diversity is co-ordinated by a Headquarters in Bombay which has several roles - of a central office, an originator, an innovator, and a catalyst.

But whether it be in town or village, the FPAI has gained credibility, respect, even affection, and notable results. The moving spirit is primarily the sense of mission, the human touch, that has been infused throughout the organisation by its dynamic and visionary volunteers, supported by dedicated professional staff.

A relationship between Government and the Association has also been built up which fosters mutual respect and participation, while fully preserving the autonomy of a voluntary organisation.

Social change is the backdrop for family planning to succeed on a massive scale; particularly, the voices of women must be clearly heard and their perceptions heeded. As one young woman in one of FPAI's numerous Mahila Mandals (women's clubs) said: "After joining the Mandal I was keen to continue my small daughter's schooling. And then it suddenly struck me that why shouldn't I too get some education? So now I go to school too" (a little laugh). In another area, a woman who joined a Mandal was running a small grocery stall. She began to learn to read, write and do small sums and her earnings went up. Such examples can be multiplied by the hundred and family planning soon gains a place. In many FPAI Mandals of young men, they are

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pledging themselves to have later marriages (with brides not under 18) and smaller families. Boys and girls are acquiring an awareness about the process of growing up, adolescence, and a personal, heightened sensitivity towards sexuality, marriage and parenthood. Small-scale social changes do have an ever-widening effect.

The FPAI has now looked into the crystal ball of the future, reviewing the changing national scenario and its own place and contribution. It can now pace itself from a position of maturity and strength, re-cast its roles and goals, and set new priorities and approaches.

An end-of-decade Strategic Plan has been evolved which spells out its mission and goals with a fresh appreciation of what the problems are, the possible solutions, and its own role. The aim is to keep on the growth path, consolidating but moving forward, not remaining placid like a lake, but flowing like a river.

A process of extensive consultation was adopted, holding 58 seminars in well spread out locations and bringing together their findings in four zonal workshops conducted in two or more languages. This was followed by an experts' meeting of senior "outside" persons who contributed their own perspectives. In fact, "outsiders" like representatives of other social and educational bodies, village dwellers, media personnel, professionals, government officials, and public workers participated along with Association volunteers and staff in all these events. It was found quite difficult at times to shed pet cliche-ridden thinking and jargon, and decide to discard or wind up some activities. But holistic perspectives came to the fore and the recipients' viewpoints rather than the promoters' convictions gained clarity. This extensive free-wheeling exercise yielded a draft Strategic Plan. In the final rounds the IPPF Regional Bureau team helped to sharpen the focus. The Plan was adopted by the FPAI All India Council, with the understanding that it would be fine-tuned to meet the currently changing Indian scene.

It is a remarkable coincidence that as this leading NGO gears itself up for its prime-of-life activities, the Government of India has also, in launching its 8th Five - Year Plan from May 1992, adopted a new action plan and unequivocally asserted that the Indian family planning programme must and will succeed only when the non-governmental sector takes a very much greater part in it. This matches the Association's thinking of many years and, therefore, provides previously unheard of challenges, opportunities and prospects. The Association will require not only all its accumulated wisdom, energies, dedication, and a higher order of funding, but a whole new generation of pioneers and pathfinders, be they volunteers or staff. But even as it grows bigger, it must not be entrapped into a bureaucracy; flexibility and a human approach must remain its hallmark.

A new and ambitious feature of the Strategic Plan is to create a Network of Non-governmental Organisations of many different kinds, and help them to add to their other programmes some elements of family planning so that it can become a household practice. The FPAI believes, and rightly, that any one organisation cannot cover the sub-continent that is India, with its 142 million reproductive-age families. But if it can bring together a few thousand large and small voluntary or private agencies to advance these and other supportive objectives, the coverage by the non-governmental sector can make a great impact. It would also become the open gateway to universal community participation which would bring final success.

In smaller countries, or where Government programmes are not extensive, the non-governmental sector can sometimes claim a high percentage of the national achievement. Not so in India, where the scale of operations is so huge.

Another new thrust is to conduct programmes to cover an entire District or Districts with its own methods of work and demonstrate good results. Since the 466 Indian Districts are populous and extensive, this means a quantum leap for any voluntary body.

The rich but bewildering *melange* of many religions, cultures, social values, customs, relationships regarding sex, procreation, and family life, overloaded by the onslaught of modern media, means that the need for meaningful communication is paramount, especially with the rising generation. FPAI's main educational efforts will be beamed to young people who, hopefully, will be the generation which adopts family planning as a way of life. Since those under age 20 constitute nearly 47 per cent of a huge population, moving on to a larger canvas will be daunting, for currently, the Association has neither the funds nor the large numbers of experts needed for such extension. It plans to face this dilemma by creating a few centres of excellence, which can have a ripple effect to wherever the young are. Even concentrating just on this one aspect would be doing a great job, especially now with education in AIDS and STDs being so urgently required.

In involving youth, girls will have a special place since they have some special handicaps. They also form part of what is compendiously termed "women's development", embracing a wide gamut of activities where Networks can function particularly well. FPAI maintains that women can be the best managers of health and family size (among other things). More than that, women hold the key to India's future and their empowerment can lead to an explosive release of the nation's energies and enterprise. This potential has hardly been tapped as yet and FPAI, like others, has its own positive role to play.

Even if a part of FPAI's new plans can take off immediately, what an exciting end-of-century period it will be!

Natural resources

The 1990s will witness the fastest population growth ever experienced. An average of 92 million people will be added to the earth every year. At this rate, it would take just nine years to replicate the Indian subcontinent, currently totalling 844 million people.

The whole world's protected natural areas today add up to only 6.5 million km². The United Nations Population Fund estimates that world population is most likely to reach 11.6 in the year 2050—six billion people more than are here now. To accomodate them, an additional land area of between 10 and 12.6 million km² would be needed.

With mineral use at present USA levels, a world of 11.5 billion people would use up today's total oil reserves in seven years, copper reserves in four years and zinc in three.

Population growth is responsible for almost 80 per cent of deforestation in developing countries. Habitat loss is directly related to population density. The one in five developing countries which are most densely populated have only 15 per cent of their original wildlife habitat left.

Every day an area of tropical forest the size of Barbados is cleared.

Source: The Third Revolution, Paul Harrison, IB Tauris, London, 1992.

WHO and family planning

Dr. J. Kretowicz

One of the most important elements of family welfare and health is control of fertility. During the past decades we have witnessed the development of new fertility regulation methods which have gained wide acceptance in developing and developed countries. Family planning is one of the most crucial aspects of reproductive health. Uncontrolled fertility is an important cause of ill health both directly and indirectly, that creates pressure on physical and financial resources and leads to social instability. Among the consequences are unwanted pregnancies and illegal abortions that often result in maternal deaths.

WHO's involvement in family planning started in the early sixties. In 1972, a special programme of Research, Development and Research Training in Human Reproduction was initiated by WHO and cosponsored by UNDP, UNFPA and the World Bank. Research in the field of contraception has had many positive outcomes, including the development of oral contraceptives with reduced amounts of hormones, implants that provide five years of protection against pregnancy, more effective and longer lasting intrauterine contraceptive devices and the introduction of safer and simpler techniques for performing tubectomies and vasectomies such as the non-scalpel vasectomy technique.

Further progress can be expected in the field of contraceptive technology. Mention should be made of the work in progress on injectable contraceptives with fewer side effects; vaginal rings that release hormones and make clients less dependent on service providers; trials of vaccines that provide temporary protection against pregnancy; and new shapes and formulations of intrauterine devices that will make them safer, more efficient and extend the duration of use. Studies are also in progress on "frameless" intrauterine devices designed for insertion during the postpartum period and on the clinical evaluation of antiprogestogens for voluntary interruption of pregnancy.

Resolutions by the World Health Assembly have stated that WHO will intensify its technical co-operation with Member Countries for the strengthening of maternal and child health programmes, including family planning, as an important part of primary health care. Formulation and implementation of such long-term programmes were carried out by WHO in co-operation with UNFPA, UNICEF and other UN agencies. Family planning needs to be strongly anchored in primary health care with wide community level participation and with particular attention given to quality assessment and assurance in the provision of services. An integrated system of service delivery in respect of maternal and child health and family planning creates the best conditions for wide acceptance by the community and it is encouraging that such integration is emphasised by many countries of the WHO South-East Asia Region.

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Today, more people of the world have access to the benefits of family planning (95 per cent in East Asia, 57 per cent in South-East Asia and 54 per cent in South Asia). In developing countries the prevalence of contraceptive use has risen from 9 per cent in 1965-1970 to 50 per cent in 1985-1990. The average number of children per woman has declined in developing countries from 6.1 in 1965-1970 to 3.9 in 1985-1990. During the last 15 years the largest decline in the rates of fertility were in East Asia (57 per cent), South East Asia (26 per cent), and in the three Latin American regions (between 27 per cent and 36 per cent).

All countries of WHO's South-East Asia Region (SEAR) have accepted family planning and child spacing as a vital component of programmes aimed at achieving better health for mothers and children. Efforts have been directed towards training various categories of health workers through fellowships and in-service training, improving the organisation and management of MCH and family planning services and supporting their effective integration. Newer and improved methods of fertility regulation have also been introduced in most countries of the region.

For the years ahead, the main objectives of WHO in the field of family planning will be to strengthen maternal and child health and family planning programmes within the broad context of primary health care. Introducing new safe and effective methods of fertility regulation and extending support to current met-hods of fertility regulation will also be an imp-ortant part of this objective. Closer co-ordination and collaboration between Governments, UN organisations, international agencies, non-governmental organisations and others committed to family planning will also need to be ac-tively promoted and strengthened if the chal-lenges of the future are to be effectively addressed.

Family planning needs

In order to meet the medium projection of 6.2 billion people in the year 2000, contraceptive prevalence in developing countries would have to rise from the current 51 per cent (381 million couples) to 59 per cent (567 million) in 2000.

These couples will need a total of 44 billion condoms, nine billion packets of oral contraceptives, 663 million contraceptive injections and 150 million sterilisations over the next eight years. The total cost of these contraceptives will be about $3.7 billion, $224 million for Africa, $701 million for Latin America and the Caribbean and $340 million for the Arab States.

- **Just one per cent of international assistance is earmarked for population programmes, totalling US $4.5 billion per year. This would have to double by the year 2000 to meet the increased need for family planning.**

Source: United Nations Population Fund

EAST & SOUTH-EAST ASIA & OCEANIA REGION

Member Associations:

Australia
China
Hong Kong
Indonesia
Japan
Korea (North)
Korea (South)
Malaysia
New Zealand
Pacific Islands Planned Parenthood Affiliation
(Cook Islands Fiji
Papua New Guinea
Solomon Islands
Tonga Tuvalu
Vanuatu Western
Samoa)
Philippines
Singapore
Thailand
Vietnam

A third of the world's 5.4 billion people live in this IPPF Region, the largest in terms of numbers. The Region also has the widest contraceptive use differential, ranging from a high of 81% in Hong Kong to a low of 5% in Papua New Guinea, and perhaps even lower in North Korea and some other countries of the Pacific. This has been attributed to the persistent use of traditional methods, a lack of method choice and internal variations; where method choice exists, FPAs find it necessary to provide quality counselling to ensure informed choice and continuity.

Service Delivery

- In Thailand, the FPA uses mobile teams to take family planning and mother and child health services to distant hilltribe villages.

▲ A Pre-school Child Care Service project in Indonesia provides an excellent entry point for family planning

- The Indonesian FPA has established high standards of care in nine "master clinics" to expand coverage by linking them to a network of 60 service units in 15 provinces.
- In Papua New Guinea, the FPA promotes the use of condoms, both for family planning and prevention of STDs/AIDS, through newspaper advertisements. Vending machines have been installed in hotels, government guest houses and air terminals, and men operating round-the-clock snack bars have been trained to promote condom use.
- The Malaysian FPA has set up a cytology laboratory to provide better services to female clients.
- In Hong Kong, some 80,000 women benefit from the FPA's annual check-up service.
- In the Solomon Islands, the FPA serves villages through a community based project, while the FPA in Tonga utilises a successful clinic-oriented approach.

The Korean FPA's pioneering and innovative spirit and its major role in providing IEC nationwide, has contributed to Korea's population growth rate of 0.97 per cent and fertility rate of 1.6; the contraceptive prevalence rate stands at 77.1.

▼ A nurse-in-charge at the Papua New Guinea FPA gives a talk on nutrition at a village outside Boroko

Programmes for Adolescents

- The Hong Kong FPA which pioneered the establishment of a Youth Health Care Centre in 1986, obtained, in the face of opposition, government recognition of its services in 1990, and by 1991 had established three centres.
- In China, the FPA has pioneered the development of sex education

The main thrust of the Region during the 1990s will lie in expanding services, simultaneously improving quality and range, to reach the disadvantaged, to serve communities better, as well as to demonstrate to governments the demand for and efficacy of accessible, low-cost, high quality services. Emphasis on services for young people in light of a rising incidence of abortions and the general reluctance of governments to provide them, and campaigning for continued government support to family planning programmes are other priority areas.

initiatives in several large cities.

In the Philippines, the FPA's 'Teen Centres' are very popular with young people. Every year, thousands of young people visit the Centres for counselling; couples under 20 also receive family planning and health care services.

trained youth counsellor of the FPA of the Philippines andling a case on the Youthline

The FPA in Singapore offers pre-marriage workshops for young people.

In Western Samoa, the FPA provides family life education to young people in schools.

The counselling centre run by the FPA of Thailand has won the support of the general public as well as many private and public agencies who refer cases to it. It produces educational materials, runs a hot-line telephone service and operates a closed circuit television/video service for sex education.

dvocacy

In Malaysia, the Philippines and the Pacific Islands, where pressure from religious, cultural and political forces exists, the FPAs continue to campaign for the sustained commitment of governments to maintain and expand services.

The FPAs in the Pacific Islands are actively involved in organising policy formulation workshops directed at government officials.

The Australian FPAs have published and distrstributed *A Family Planning Fact Kit for Well-Informed Parliamentarians* to over 800 Members of Parliament at Federal and State level.

POPULATION PROFILE

Population estimate mid-1992 (millions)	[illegible]
Percentage rate of natural increase	**1.4**
Infant mortality rate (per 1000 live births)	**36.3**
Total fertility rate	**2.4**
Percentage population under 15 years	**29.4**
Percentage married women using contraception*	**66.3**
GNP in US $ (1990)*	**2707.7**

The values are weighted averages.
*Excludes any country for which figures were not currently available

The Asian diversity - Meeting the challenges

Mr. V.T. Palan

This article will limit itself to the challenges facing the planned parenthood movement and more specifically those that can best be addressed by non-governmental, voluntary organisations. Once the scope is defined and the perspectives limited to NGOs, the range of challenges does become more manageable.

Planned parenthood affects almost every facet of life from environment to health; from the general quality of life of individuals/families to the overall social and economic development of a nation. This all pervasive interaction of family planning, in the broadest sense, with all other facets of life, makes the job of identifying challenges in some ways easier, but in some other ways a much more complex phenomenon.

Asia is by far the biggest continent with the largest population, greatest heterogeneity, and complexity, and with the richest traditions and cultures. If the Asian countries can in some way meet the population challenges and stabilise their populations in the context of sustainable development, it goes without saying that the world population would be stabilised within the foreseeable future, and the strategies to stabilise it, unravelled for possible replication.

The question is: can Asia given its diversity and large population 'base' be in a position to stabilise its population within say the next two to three decades? Looking at the family planning scenario, there is no doubt that the answer would be 'YES'. After all, many of the countries in Asia have already successfully transformed their population from a high fertility- low mortality situation to a low fertility-low mortality situation, within an unprecedentedly short span of time. Countries such as the Republic of Korea, the People's Republic of China, Hong Kong and even the Republic of Singapore have demonstrated the possibility of achieving demographic transition within a span of 20-30 years. This transition is remarkable, even in comparison with the demographic transition witnessed in Western European countries. Thus, it is clear that Asia has demonstrated that with the right supportive factors including unequivocal and positive Government population policies, it is possible to look forward to a population structure and rates of population increase, which will help in the social and economic development of the countries in Asia, and improve the quality of life of the population. We need to ensure that we borrow and adapt the good things from the West, while holding steadfast to our 'Asianess'.

What then are the challenges that Asia is likely to face and in which the NGOs have a leading role to play?

First, it is important to ensure that Governments in Asia do not enlarge and confuse the need for population planning at the individual/family level, be it for health reasons, demographic reasons or even as a fundamental human right, with the ongoing controver-

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sies pertaining to North-South relations in the political, economic and trade areas. An NGO, in its advocacy should caution against comingling family planning matters with the wider legitimate concerns of terms of trade, and debt servicing etc. Issues of planning one's family should be made "apolitical", as there can be no divisiveness, and there must be cohesiveness and unanimity in promoting family planning with its obvious benefits. There can be no doubt that planning one's family has intrinsic benefits to the individual/ couple, particulary the women, and ultimately to the family and nation. Thus, the position NGOs will have to espouse is to clearly articulate the "apolitical" role of planned parenthood, as an inalienable right of individuals and families, notwithstanding other injustices and double standards in the world in the area of trade or other facets of social, political and economic life.

Asia with its long and rich cultural tradition will need to meet the challenges such traditions and cultures have, in the area of planned parenthood. Almost all of Asia's culture and traditions have always been pronatalistic with a strong preference for sons. In each and every part of Asia, we see that culture and traditions have always encouraged the need to have large families with an overwhelming preference for male offspring. This has become very much ingrained in the traditional value systems of Asian societies. The challenge is to see if countries in Asia can reconcile traditional values with the needs of modern realities, such as having smaller families and diffusing the son preference practice, in order to provide better job opportunities and improved quality of life. NGOs, with their wide-based grassroots membership, have to spearhead the need for such changes in traditions and customs so that population planning can become an important factor contributing towards the economic development of countries in Asia, within their own cultural values, norms and systems. This will be an important initiative if women are to have their rightful place in Asian societies and within the Asian value systems.

One aspect of Asia's population which has thus far held back a clear and unambiguous policy goal towards family planning, has been the pockets of parochial concerns, be they based on sub-geographic needs (such as state or provincial concerns), religious bigotry or even the "voting power" concerns of the majority and minority based on racial or linguistic groups. The challenge is to see how one can encourage the submergence of these parochial concerns in the greater interest of the nation, so that economic development can be more equitably shared within the country, and Asian nations can become once more the guardians of traditional values within the framework of being "economically developed countries".

One major concern that the expansion of contraceptive practices would bring to the forefront, would be the question of cost sharing. Given the enormous financial burdens governments have to face in building the infrastructure and in promoting economic development, it would not be possible to provide contraceptive services to all couples in need of such services, free, *ad infinitum.* Therefore, the question of cost recovery within the framework of programme sustainability has to be an issue on which NGOs have to openly encourage discussion. Otherwise, contraceptive service provision and its availability, might become an economic issue competing for limited national financial resources, and therefore be given lower priority *vis-a-vis* other development concerns. Because family planning tends to provide long-term benefits, resources would be diverted to other short-term and more visible and tangible development concerns.

Alternatively, contraceptive provision may well be "abdicated", because of cost consideration, to the private sector, and thus "shortchange" the poorer segments of society who are most in need of such services and without the provision of any "safety net". NGOs should actively promote discussion on these issues to ensure that there is a careful consideration of all aspects of the cost of contraceptive provision within the framework of programme sustainability. This is so that Governments can, over the years, ensure cost-sharing in the provision of family planning services, with clearly set-out "safety nets" for the disadvantaged segments of the community.

One of the major challenges facing the family planning movement would be to highlight the intricately linked issues of 'choice' and 'quality of care' in the provision of family planning services. The family planning movement has, thus far, generally focused on 'quantity' of family planning acceptors, to the extent that it has inadvertently overlooked the two other important dimensions in the provision of family planning services -'choice' and 'quality of care'. Because the movement, in its early years, was keen to ensure high levels of contraceptive prevalence, it had inevitably sacrificed the questions of 'choice' and 'quality'. Ideally there should not have been a question of quality versus quantity, but in reality because of conflicting pressures and financial limitation, quality has sometimes been sacrificed for the sake of quantity. The challenge for NGOs is to see if the provision of family planning services can now take into account the need to offer appropriate choices of contraception to meet the different circumstances of couples, and at the same time ensure that there is an essential standard of care that is made available in the provision of these contraceptives, and this regardless of the income levels of the couples in need. This challenge does not only require new attitudes and skills among providers, but also a great deal of sensitivity to the new quality emphasis in service delivery. It also needs an expansion of the financial resources to family planning.

One inevitable outcome of the economic and social development of countries, is the concomitant expanded role of women in society. This expanded role, often reflected in the form of more women in tertiary education or increased female participation in the formal sector of the labour force, also means that the provision of family planning services has to meet the new needs of these women. This not only means the availability of services at appropriate and convenient times, but we also need to address the wider issues pertaining to child care, availability of day care centres, and the intricate nutritional and other needs of infants, in the context of women fully engaged in the labour force. The NGOs have a new role not only to articulate the changing needs of the community, in particular the women, but also to experiment with new approaches to meeting some of these demands, the aim being to encourage governments to then adopt and adapt some of these successful standards nationwide. It is only governments who have the means and resources to implement these nationwide, but the catalytic role of NGOs is equally important.

The NGOs will have to continue to press on with their advocacy role, though in the 1990s and beyond it would be of a different nature. While the NGOs have been successfully legitimising and advancing the cause of family planning in the 1950s and 1960s, their new roles in advocacy would be somewhat different. This role will now have to encompass concerns and abuses in the provision of family planning services at all levels in society; especially among linguistic or religious minority groups.

Oftentimes, because family planning has gathered a great deal of legitimacy, there has been a tendency to use coercion and other strong disincentives to promote family planning. NGOs, being organisations with grassroots support, have to be the 'eyes and ears' of the community to bring abuses and other unacceptable coercive practices to the attention of the Government. This is particularly necessary when the provision of family planning services may well move back to the private sector because of cost consideration and therefore run the risk of improper practices.

These are some of the key challenges that many NGOs will have to confront in the years ahead, in addition to a self-analysis process to make them more relevant, appropriate and useful to the community they serve.

Pakistan's fertility and family planning: Future directions

Dr. George P. Cernada and **Dr. A.K. Ubaidur Rob**

The country and people

Pakistan emerged as an independent state on August 14, 1947, nearly 45 years ago, when the British presided over the partition of the Indian subcontinent. The country came about as a demand for an independent Muslim state. In 1971, East Pakistan separated and became an independent state, Bangladesh.

The present country has a land area of about 800,000 square kilometres, an estimated population of nearly 120 million, a per capita income of less than US $ 400, a literacy rate of about 30 per cent, and an annual population growth rate of more than 3 per cent. This population growth rate is one of the highest in the world, particularly among the larger developing countries.

The people are a blend of ethnic groups throughout the four provinces of Baluchistan, North West Frontier, Punjab and Sindh. Although Urdu is commonly used, the languages of everyday discourse number at least six, and English is used in official or commercial transactions. Religion is primarily Muslim.

Economy

The per capita income in 1990-91 was Rs. 9,000 (US$ 360). An estimated third of the population live below the poverty line. Nearly three-fourths live in rural areas and more than half are employed in agriculture. The high rate of population growth places an additional burden on the economy as well as the social structure of the country [1]. The economic dependency burden in 1990 was estimated to be as high as 94 [2].

Literacy/Education

At 31 per cent, the country's literacy rate ranks among the world's lowest. A 1985 estimate showed that the female literacy was 18 versus 43 for males. In the province of Baluchistan, the 1981 census showed only four per cent female literacy. Primary school enrolment is estimated at 50 per cent overall and 32 per cent for females.

Status of women

Female participation in society outside the family is constrained by social, political and religious factors. Labour force participation for women outside the home and for wages is extremely limited. Females on average have 6.8 births and 600 per 100,000 women having live births die of childbirth-related problems. Female enrolment in primary school is 32 per cent. Investment in human resources has considerable room for improvement. In terms of relative ranking among all countries, Pakistan has one of the highest fertility rates; one of the highest maternal mortality rates; the fourth highest ranking for percentage of low birth weights (28 per cent in 1984); and the world's sixth lowest female to male primary school enrolment ratio [3].

Population

Pakistan has increased to four times its population at the time of Independence (1947): from 32.5 to an estimated 118 million by 1991. At the last census in 1981, the population was 84.3 million [4]. The 1961 census, including West

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and East Pakistan, showed an annual population increase of 2.3 per cent during the preceding decade. The Population Growth Estimation project placed it at 3.3 per cent for 1962-65. The growth rate since independence was estimated at 2.9 per cent per year[5]. The present population growth rate is about 3.1 per cent which means about 3.5 million more births than deaths per year. The high growth rate also reflects a substantial decline in the death rate since Independence.

According to the 1981 census, 72 per cent of the population lived in rural areas. Urban growth, however, has been dramatic over the past ten years[2] and an estimated third of the people live in urban areas. Slum conditions are becoming increasingly widespread in cities such as Karachi which had an estimated population of more than seven million in 1989. According to the 1981 Census, 98 per cent of the population was Muslim. The people are descendants of several racial and subracial groups which came to the subcontinent some 5,000 years ago from central and western Asia. The sex ratio of 91 women to 100 men is one of the lowest in the world. And, about 45 per cent of the population was under 15 years of age. A summary of Pakistan's demographic characteristics may be found in Table 1.

Although reliable data are difficult to obtain, it is estimated that the crude death rate is about 10-11 per thousand per year. At the time of Independence, it was about 25-30. This drop was due to changes in economic and social conditions. Infant mortality is estimated at less than 100 deaths per thousand live births. An estimated 500-600 women per hundred thousand live births die of childbirth related causes annually: one of the highest rates in the world. Life expectancy is estimated at 57-58 years. Unfortunately, no more than half the population has access to even the most basic of health services. More than half the population is without safe drinking water, and about half live in one-room housing[1].

TABLE 1

Pakistan: Demographic characteristics, 1992

Population estimate (millions)	120
Population/sq. kilometre	1,500
Crude birth rate	42
Crude death rate	11
Natural increase rate (%)	3.1
Population doubling time in years (at current rate)	23
Population projected (millions)	
To the year 2000	150
To the year 2015	235
Infant mortality rate (per 1000 live births)	100
Total fertility rate	6.1
% Population <15/65+	44
Life expectancy at birth (years)	56-57
Urban population	28
% Married women using contraceptives (total/modern)	12/9
Per capita GNP, 1990-91 (US$)	$360

Source: 1992 World Population Data Sheet, Population Reference Bureau, Washington D.C., 1992.

Fertility

The crude birth rate has varied from 37 to 43 per thousand population and the total fertility from 5.9 to 6.9 children per woman, according to surveys since 1974. The total fertility rate was estimated at 6.1 in 1991[6]. A recent national survey attributes what decline there has been to a gradual decline in the age at marriage[2]. In 1991, the crude birth rate was estimated to be 43 per thousand, one of the highest among South Asian countries. A third of married women of childbearing age interviewed in the national sample Demographic Health Survey in 1990-91 said they wanted no more children[2].

Population Policy

Family planning services in the new nation of Pakistan were first introduced in an organised fashion by NGOs: mostly directed to refugees coming from India. Since 1952, family planning services were organised by NGOs in Karachi, Lahore and Dacca and family planning associations formed. Public sector family planning services began in 1960 as part of the Second Five-Year Plan, 1960-65[7]. A definite *population policy*, however, did not appear until the Third Five-Year Plan, 1965-70[8]:

> **"The improvement in living standards, as reflected in the earlier projections of per capita income, rests heavily on certain assumptions**

> **regarding the growth of population... With the planned improvement in health facilities and nutritional standards, the mortality rate is likely to decline fairly rapidly. Unless it is checked by a fall in the fertility rate, the population growth rate could easily be pushed beyond 3 per cent per annum. If this happens the population will double itself by 1985. Such an increase would defeat any attempt to raise per capita income by a significant amount. A vigorous and broadly-based programme of family planning is therefore an integral part of the strategy of the Perspective Plan."[5]**

Implementation of this policy consisted of a national programme to provide contraceptive services and person-to-person family planning counselling by paramedical staff to married couples of reproductive ages.

The Government has not changed its policy position greatly since 1965, although implementation and organisational inputs have been subject to numerous financial and political constraints which have produced periods when relatively little family planning service was being provided. At present, the goal is to reduce the growth rate from 3.1 to 2.5 per cent by the end of the century. This goal has been publicly reiterated by the Prime Minister in terms of the serious handicap the present population growth rate is to socio-economic development. He has requested more active involvement from all public socio-economic sectors and under a directive to all federal and provincial ministries, inter-ministerial committees have been set up at the federal and provincial levels to review and monitor the family planning programme. The Government continues to state that the country's current population growth is a major deterrent to socio-economic development. Its stated goal is to reduce fertility in order to control growth.

The Ministry of Population Welfare is responsible for developing and implementing family planning policy and programmes as an integral component of the national socio-economic development plan. Emphasis is on improving the standard of living and quality of life by promoting a small family norm.

The present Seventh Five-Year Plan, 1988-93[9] also emphasises a population policy which focuses on reducing infant and child mortality on the assumption that the resulting increase in child survival will help reduce fertility. The target for the five-year period is to lower the crude birth rate from 42.3 to 38.0 per 1,000 by increasing the contraceptive practice rate from 12.9 to 23.5 per cent, which is projected to prevent some 3,170,000 births.

The family planning programme

The public national family planning programme began in July 1965 with the start of the Third Five-Year Plan (1965-70). Its goal was to lower the crude birth rate from 50 to 40 per 1,000 by providing contraceptive protection to 25 per cent of the 20 million fertile couples by 1970[8]. Similar targets have been the major focus of each of the five-year development plans. Several implementing organisations have changed or developed over this period to deliver these services and numerous strategies have been developed related to outreach, contraceptive methods, and delivery systems, and approaches used to provide services.

It is generally agreed both within Pakistan and outside that there has been insufficient demand created and inadequate provision of services, particularly in rural areas. The programme has a history of ambitious objectives that have not been met as the programme tried to increase services by various uses of the Family Welfare Centres, NGOs and supply distribution schemes[10]. These unrealised plans generally have been attributed to a "lack of consistent government commitment and social and cultural constraints" as well as financial, organisational and operational obstacles[2].

The national family planning programme consists primarily of 1,246 Family Welfare Centres staffed by lay workers spread throughout the country, except in tribal areas. In addition, Government hospitals and clinics are the major source for female sterilisation. The contraceptives provided include condoms, oral contraceptives, IUDs, injectables and sterilisation, primarily female. The use of mass media is limited. A social marketing programme to promote the sale of condoms and oral contraceptives is in effect and the major source of pills and condoms is the drug store and other shops. It is doubtful that public outreach services are able to reach more than 12 per cent of the couples of childbearing ages. Outreach is limited and worker morale is believed to be low.

Non-governmental organisations also offer services but primarily to urban areas and on a limited basis. The Family Planning Association of Pakistan is the most active. Much of the NGO work is intended to be guided by the NGO Co-ordinating Council (NGOCC) situated in Karachi.

The private sector is estimated to account for about one-third of all acceptors each year, versus from 55-65 per cent by the public sector. This private sector includes pharmacies, private physicians, allopathic and indigenous medical practitioners and traditional birth attendants or *dais*.

The state of the art

A recent international review[11] has ranked Pakistan's family planning programme effort as "moderate" among developing countries. It is listed as 42nd among 98 countries ranked by level of effort. For comparison, India's and Bangladesh's are rated as "strong" and 9th and 10th in level of effort among the 98 countries.

The natural increase rate is generally accepted to be about 3.1 per cent. According to the recent Pakistan Demographic and Health Survey of married women 15-49 which suggests a lower increase rate[2]:

1. Current family planning method practice is about 12 per cent.
2. About 9-10 per cent are currently using a modern contraceptive.
3. About 21 per cent had ever used a method.
4. Fewer than half (46 per cent) who had ever used family planning began use when they had fewer than three living children.
5. About one in five had heard of family planning in the mass media.
6. About 45 per cent know of a modern method and a source where they can get the method.
7. Some 62 per cent who know of a contraceptive method approve of family planning use
8. A quarter of women say it is ideal for a women to get married at age 15 or younger.
9. The infant mortality rate remains in the 90-100 range; and
10. 36.4 per cent of currently married women aged 15-49, want no more children.

Some lack of achievement in Pakistan's Seventh Five-Year Plan, identified in the draft proposal for the Eighth Five-Year Plan[12] includes:

1. Contraceptive service expansion to a third of the population has not materialised due to, among others, lack of funding and restrictions on staff recruitment; it remains at no more than 20 per cent.
2. Targets for clinical methods had not been achieved by the end of 1991 since planned expansion to 45 new Reproductive Health Services A Centres, 130 mobile service units and 97 Family Welfare Centres as well as involvement of health departments did not materialise.
3. Although targets for conventional contraceptives have been met, there is reasonable doubt that all the contraceptives issued have been used due to the low price which promotes worker over-reporting.

To help correct some of these problems and prepare for the Eighth Plan (1993-1998), several evaluation and operations research projects were started including, among others:

1. The prices for condoms and oral pills were raised in November 1991. Early results of contraceptive distribution evaluation suggest that some previous over-reporting may be reduced.
2. A situation analysis of the present status of a sample of 100 Family Welfare Centres is being completed (June-August 1992) to assess the supply and quantity and quality of outreach service being provided.
3. A sample IUD follow-up survey to determine the actual extent of use and situation of IUD acceptors was started in August 1992.
4. The Demographic Health Survey was completed and a profile of the unmet needs of married women 15-49 prepared.

The present public and private family

planning service delivery system is estimated to reach no more than 20-25 per cent of the population. The Eighth Five-Year Plan calls for increasing family planning coverage to 70 per cent of the rural and 100 per cent of the urban population. To do so, a new emphasis, increased energies and expenditure, and new infrastructure in the field are called for.

New directions (1993-1998)

The overall objectives of the Eighth Five-Year Plan are:

1. To raise the level of contraceptive use from an estimated 14 per cent in 1992-1993 to 29 per cent in 1997-1998.
2. To reduce the total fertility rate from 5.9 in 1992-1993 to 4.7 in 1997-1998.
3. To reduce the crude birth rate from an estimated 41.5 in 1992-1993 to 34.8 by 1997-1998.
4. To prevent 4.8 million births.
5. To reduce the rate of population growth from 3.1 per cent in 1992-93 to 2.6 per cent by 1997-1998, in line with the targeted reduction of the population growth rate to 2.5 per cent by the year 2000.

Without a recent census though, it is difficult to have more than an estimated baseline from which the Eighth Five-Year Plan is to start. Recent Government announcements indicate that the postponed National Census will be conducted in late 1992.

In order to catch up with the Seventh Plan target shortfall, an accelerated programme has been funded for the last two years of the Plan. Recent action taken by the Federal Government includes:

1. Exempting population welfare funds from the overall 1991-1992 budgetary cut as well as increasing the budget.
2. The Prime Minister has issued a written directive to all federal and provincial ministries requesting full support for an effective integrated approach and set up inter-ministerial committees at federal and provincial levels to monitor progress.
3. Some progressive increase in the proportion of government to foreign assistance over the Plan period.

The rise in the budget is particularly significant because the actual allocations provided over the first three years of the Plan were less than the budgets requested.

Numerous proposals approved by the cabinet for the accelerated programme include, among others, two innovative approaches with significant potential to improve the programme:

1. Introducing a family planning component in some 7,800 rural health centres with a lady doctor or female paramedic.
2. A large pilot study of community-based family planning workers in nine districts (4 in Punjab, 2 in Sindh, 2 in NEFP and 1 in Baluchistan) to improve person-to-person counselling and service delivery.

Both of these projects would be used to expand service delivery in rural areas during the Eighth Plan.

The thrust of the Eighth Plan is to get family planning counselling and supplies to the rural areas, i.e., to increase outreach. To do so, the major approaches will be:

1. A major change in the programme infrastructure. It consists of hiring 12,000 workers from villages to provide counselling, supplies and referrals.
2. Involving all health outlets in the provision of family planning services.
3. Involving private medical practitioners in service provision.
4. Strengthening supervision, monitoring and feedback at the division and tehsil levels.
5. Emphasising the IUD, injectables and contraceptive surgery.
6. Upgrading the IEC campaign and integrating it with the expanded person-to-person approaches.

The proposed five-year targets for contraceptive prevalence rates and their breakdown by method are contained in Table 2. To achieve these targets, it is estimated that the present rural coverage of the programme will need to rise from five per cent to 70 per cent and the urban coverage from 50 to nearly 100 per cent. In other words, total outreach needs to quadruple from its present estimated 20 per cent to 80 per cent in the six years remaining till the

TABLE 2
Contraceptive prevalence rate (CPR) targets, and percent distribution of contraceptive users by method, 1992-3 to 1997-8

Year	CPR targets		Percent distribution of contraceptive users						
	CPR*	Total users (Million)	Condom	Pill	IUD	Injectable	Other	Foam	Total
Base year (1992-93)	14.0	2.7	30	8	34	9	18	1	100
Year 1 (1993-94)	17.0	3.4	28	8	32	11	20	1	100
Year 2 (1994-95)	20.0	4.1	25	9	30	12	23	1	100
Year 3 (1995-96)	23.1	4.9	23	9	28	14	25	1	100
Year 4 (1996-97)	26.1	5.7	21	10	26	15	27	1	100
Year 5 (1997-98)	29.0	6.6	19	10	24	17	29	1	100

*Source: Adapted from Ministry of Population Welfare, Government of Pakistan, *Proposed Population Welfare Programme for Eighth Five-Year Plan 1993-1998* (Draft). Islamabad, April 1992.

end of the Eighth Plan. To achieve these targets, IEC, urban and rural strategies have been developed.

IEC strategy

A general IEC strategy will be developed based on the need to improve interpersonal communication backed by electronic media, such as the radio and TV. In addition, point of service identification (e.g. visible family planning signboards) will be provided nationally. cent of the population.

2. Increasing coverage by involving Basic Health Units, Rural Health Centres and MCH centres in counselling and service delivery.
3. Fielding some 400 Mobile Service Units at the tehsil level to provide services to remote villages.
4. Increasing the number of trained birth attendants from 5,000 to 7,000 to provide counselling, supplies and referrals, working closely with mobile units and Rural Health Centres.
5. Hiring a new type of village-based worker for villages with 2,000 or more people. This community-based, motivator-cum-service-cum referral worker would be female, married, matriculate if possible, and with children and using contraception where feasible. She would be from the village she would serve. She would be trained for 3-4 months to administer injectables, supply pills, condoms, foam tablets, and refer for IUD and contraceptive surgery. This scheme will be tested on a pilot basis in 1993 and, if successful, expanded to 12,000 villages covering 60-70 per cent of the rural population.

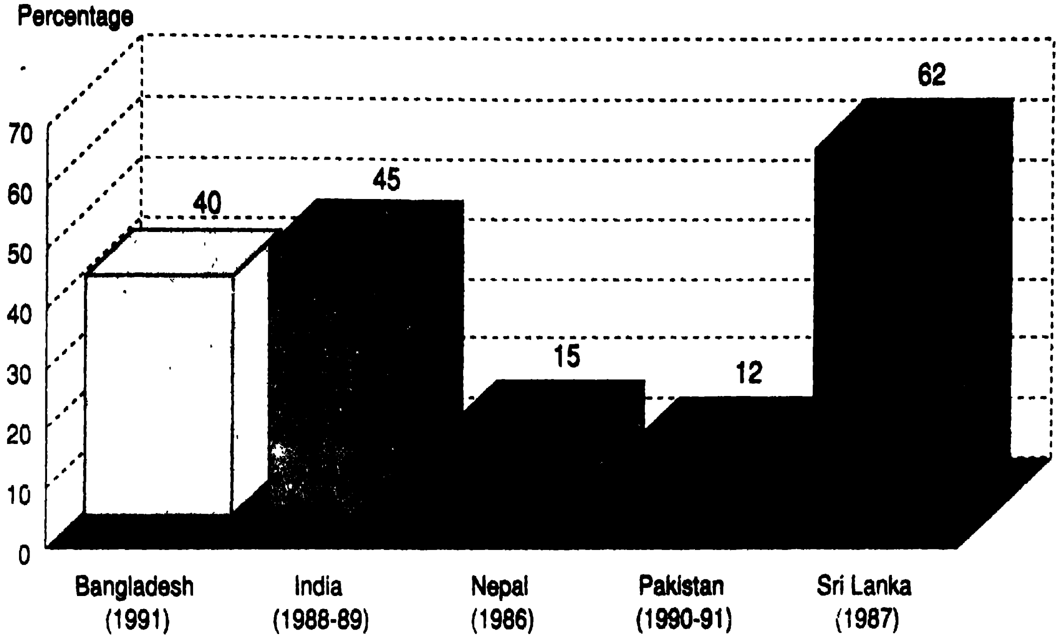
Observations

If the number of married women aged 15-49 increases, as projected, from 19.5 million in 1992-93 to 22.8 million by 1997-98, the number of couples who would have taken up contraceptive methods will be immense. In other words, for current use of contraceptive practice to rise from 14 to 24 per cent over five years as proposed, the actual number of contraceptive users will have to more than double. Considering that the baseline may be an overestimate, this becomes a more than ambitious undertaking. Increase in age of marriage may mitigate some of these assessments but to what extent, remains uncertain.

To lower the growth rate to 2.6 per cent by 1997-98 means a rise in contraceptive prevalence of 3 per cent per year. A recent team has indicated that this is a rate "rarely achieved by any country for a period of five years or more."[13]

Countries such as Bangladesh, Indonesia and Thailand have been able to achieve increases in contraceptive prevalence over longer periods in the range of two per cent per year but only with considerable government commitment, resource allocation and intensive field outreach efforts. There appears to be

FIGURE 1
South Asian Countries
Estimated contraceptive prevalence as percent of married women aged 15-49



Adapted from : –The World Bank, World Development Report 1991, Oxford Univ, Press, N. Y., 1991
– Population Reference Bureau, 1991 World Population Data Sheet, Washington, D.C. 1991

increasing national political backing for the family planning programme and public statements of government support. It will take an all-out effort to reach the targets proposed, however. Most important will be ways to: upgrade the quality of counselling and services; to get to the village; and to be certain that the targets are realistic and attainable and will not affect continuation of use adversely.

One lesson we may be able to learn from the experience of Pakistan and other South Asian countries is that any launching of a large-scale new intervention could profitably be preceded by a smaller-scale pilot project to identify the likely problems to be dealt with. It is refreshing to note the emphasis on using the remaining time in the Seventh Plan to begin some of the kind of diagnostic studies, operations research, pilot and demonstration studies required before upscaling. For example, a pilot (one-district or less) study, to figure out how best to recruit, select, train, supervise, and manage the proposed community-based worker.

A reasonable amount could be learned from the experience of Bangladesh with demonstration projects that pay close attention to the quality of care in the expanded outreach system. Some recent criteria for a proposed demonstration project that involves a closely-monitored multi-intervention approach has applicability here. The interventions include:

1. Hire a sufficient number of workers to cover the geographic area.
2. Select female workers who are married, have children, practice contraception and live where they work.
3. Provide a better mix of contraceptives (IUD, condom, pill, injectables, etc.) that are where they ought to be when needed.
4. Train workers to be truthful about possible side effects and give them the means to treat them.
5. Develop and implement a systematic home visiting procedure.
6. Give credit/incentive to the field worker for continuation of use of these methods by building long-term use into the targets.

7. Promote spacing as a way of introducing contraceptive use, as a major health benefit, and as a logical demographic method to cut back on fertility.
8. Revise the management information system to better monitor field efforts.
9. Improve the quality and availability of counselling and IEC materials (eg. portable pocket-size flipcharts, etc.).
10. Focus supervision primarily on helping fieldworkers do a better job. Where feasible, use mobile service units to help.
11. Go back and retrain existing fieldworkers and their trainers. Help them refocus their approaches and, in particular, try to match the person to the contraceptive method with attention to quality of care and continuation of use; and
12. use community volunteers initially as contraceptive depot holders and later as motivators.

The key to success here is to do it all at once in one place and in the most simple and direct manner to demonstrate that change can take place and be replicated elsewhere [14].

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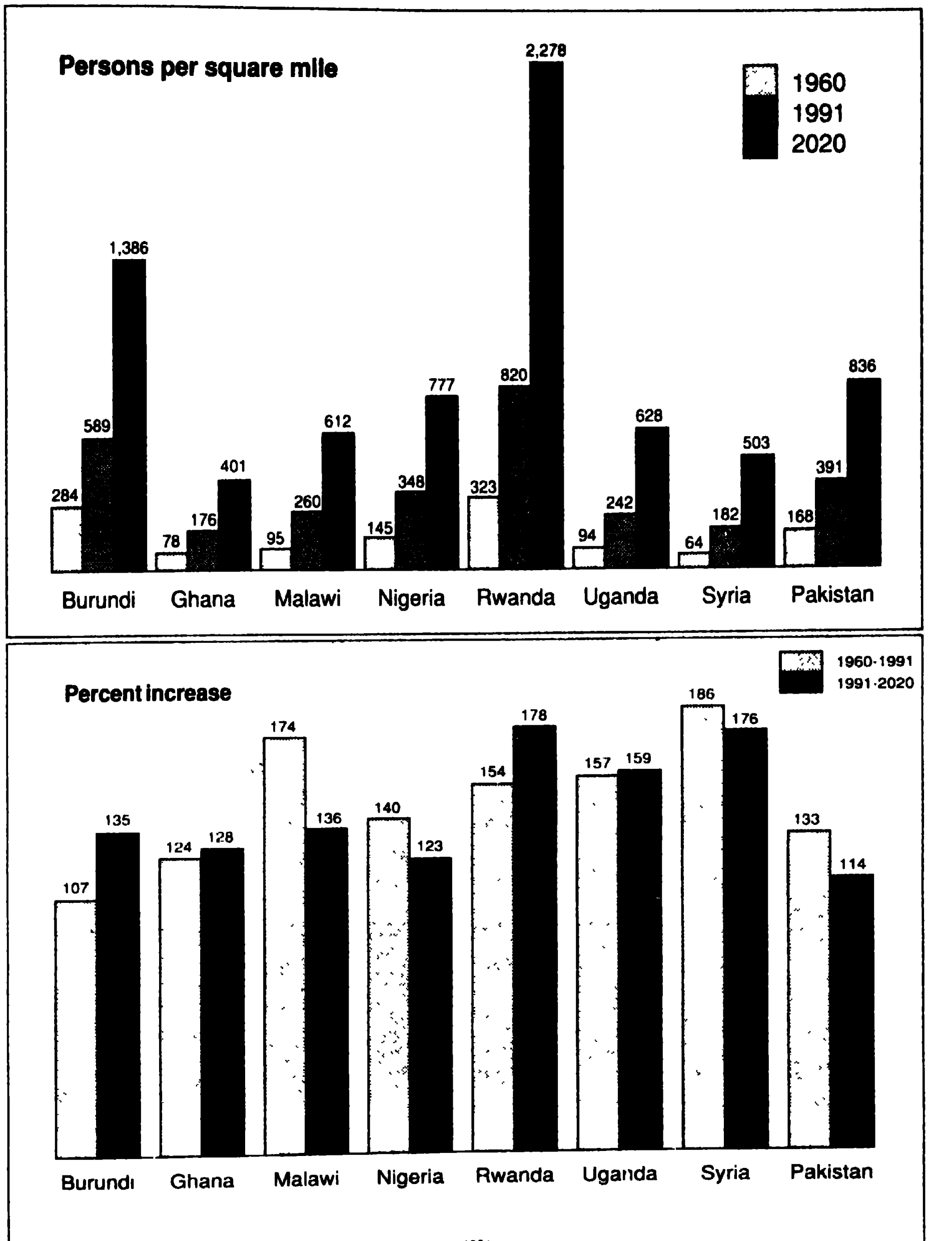
Declaration of the Asian Women Parliamentarians' Conference on Population and the Status of Women, March 1990

We, Parliamentarians from 26 countries of Asia ... hereby declare the following principles:

- Sustainable development means creating a balance between population growth and the environment in order to ensure the future of coming generations. *(paragraph 3)*
- The inextricable link between population and the status of women, if reflected in socio-economic policies, including family planning programmes, will help eliminate poverty, achieve sustainable development and promote stability and peace. *(paragraph 6)*

Countries whose 1991 density is 150 percent or more of world average and will at least double by 2020



Source World Population Profile 1991 US Bureau of the Census 1991

Among world's nations with a population of at least 5 million, there are 8 countries whose density exceeded the world average by 50 per cent or more in 1991 and whose density is expected at least to double from now to the year 2020. Six of the eight countries are in Sub-Saharan Africa.

In four of these countries—Burundi, Ghana, Rwanda and Uganda—the per cent increase in population density over the next 30 years is likely to equal or exceed that of the previous 30 years. This is true even under the assumption that fertility levels will be declining throughout the projection period.

Source: World Population Profile: 1991, US Bureau of the Census, 1991

SOUTH ASIA REGION

At an annual growth rate of 2.2%, the population of this IPPF Region - 115. - is expected to double in 32 years. With high rates of infant and materna poverty and low literacy especially among women, fertility levels in this region high - 4.3 births per woman . Though age at marriage has risen, 24% of the wom married before menarche and 20% of rural women experience their first birth a less. About 43% of women practice contraception, and among non-users, 30% sa want no more children and 20% wish to postpone the next birth for at least two

Member Associations:

Bangladesh
India
Nepal
Pakistan
Sri Lanka

Reaching Rural Communities

- In the Rural Welfare Centres run by the Pakistan FPA, young women paramedics extend their influence on the community by training traditional birth attendants. Village postmasters and 'Hujra', an exclusive male village institution are also used for promoting family planning.

▲ Traditional birth attendants being trained by FPA workers in Pakistan (top) and Bangladesh (bottom).

- The Indian FPA serves about 2.2 million people in 2,265 villages through a network of 3,689 local voluntary groups in integrated community development projects which include family planning and MCH. 1,331 of these groups are institutional members of the FPA.
- In Sri Lanka, a band of about 40,000 young, trained voluntee work with village committees i motivational programmes. The FPA moves out after two years leaving the groups to continue their own.

In the Himalayas, a project run the FPA of Nepal combines environmental protection with health and family planning services.

In 20 districts of Bangladesh, pedlars of traditional medicine advocate family planning, distribute condoms and pills, a refer those needing a clinical method. Registrars of marriage and local market hawkers are a being used as promoters..

The Sri Lankan FPA operates a very successful contraceptive retail sales programme. According to a survey, the proj serves 85% of condom users 36% of pill users in the country

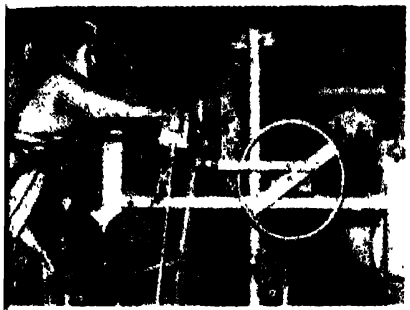
Youth & Women's Activities

- The Sri Lankan FPA has set up a youth counselling centre in 199 to address the sexual and reproductive health needs of young people.

▼ A trishaw used by the FPA of India in its vaccination w

Governments of these countries are giving increasing recognition in their development ans to the vital role of family planning, and have adopted population policies and targets, t implementation lags behind. There is growing support for the expansion of family anning programmes and many NGOs and indigenous organisations have become volved. The provision of quality services particularly spacing, and especially for younger uples in disadvantaged areas, advocacy, and the reproductive health needs of young ople and women are major focus areas of future FPA programmes.

The Indian FPA provides counselling to couples before and after marriage, and also a wide range of education and training programmes in family life and human sexuality for professional people, youth, parents, etc.



Women working at a loom provided to them through the Small Farmers Development Project in Nepal.

All FPAs offer programmes in population and family life education for young people in both formal and non-formal sectors. Recently, STD/AIDS prevention has been included in the IEC programmes.

The Pakistan FPA offers skill training along with education in health and family planning to disadvantaged women.

The Nepal FPA takes primary health education and family planning to women in remote rural areas through an integrated community based approach.

At the mothers' clubs run by the Bangladeshi FPA, rural women acquire an income-producing skill as also information on healthy family living, including family planning.

In the integrated women's development projects run by the Indian FPA, one out of four adult women learners and over half the beneficiaries of economic schemes are planning their families.

Mobilising Other NGOs

- Following a National Conference on Population, Development and the Environment for NGOs, the Indian FPA has created a network of NGOs which will evolve mutually reinforcing strategies to improve the quality of life of the people, It has over 300 members. The FPA also receives a government grant to provide consultancy services to 31 smaller NGOs to integrate family planning into their activities.
- With USAID funding, the Bangladesh FPA has trained and mobilised 225 NGOs to participate in population activities.

▼ A group of workers in a plantation in Sri Lanka, listen to a motivator describing the benefits of family planning.

- Through its 156 work units, the Pakistani FPA has actively involved some 343 registered welfare organisations in its family planning activities.

POPULATION PROFILE

Population estimate mid-1992 (millions)	**1153.2**
Percentage rate of natural increase	**2.2**
Infant mortality rate (per 1000 live births)	**95.0**
Total fertility rate	**4.2**
Percentage population under 15 years	**37.7**
Percentage married women using contraception*	**43.0**
Per capita GNP in US $ (1990)*	**337.4**

The values are weighted averages.
*Excludes any country for which figures were not currently available

Population dynamics and the family welfare programme in India - An overview

Dr. M.E. Khan

POPULATION PROFILE OF INDIA

The provisional results of the 1991 Census placed India's population at 844.32 million as of 1st March 1991. The difference between the provisional figure and the final count being generally of the order of two million, this figure may be assumed to be about 846.3 million. According to many demographers,[1-3] the level of under-counting in the 1991 Census is higher than that noted during 1981, that is 1.8 per cent, and could be of the order of two per cent. The Registrar General of India, however, claims that

TABLE 1
Profile of India's population and vital rates

	Profile of Indian population *					Fertility			Mortality	
	Size	Growth rate	Sex ratio	Literacy rate (1981-91)	Working pop.	Birth rate	TFR	TMFR	Death rate	Infant mortality (1990)
INDIA	**844**	**23.5**	**929**	**52.1**	**37.6**	**29.9**	**4.1**	**5.4**	**9.6**	**80**
Andhra Pradesh	66.3	23.8	972	45.1	45.3	25.6	3.6	4.9	8.7	70
Assam	22.3	23.6	925	41.2	36.4	27.5	4.0	6.9	9.7	77
Bihar	86.3	23.5	912	38.5	32.6	32.9	5.1	6.0	10.6	75
Gujarat	41.2	20.8	936	60.9	41.2	29.5	3.6	4.7	8.9	72
Haryana	16.3	2.3	874	55.3	30.8	31.8	4.3	5.4	8.5	69
Karnataka	44.8	20.7	960	56.0	41.8	27.8	3.4	5.0	8.1	71
Kerala	29.0	14.0	1040	90.6	32.1	19.0	2.2	4.5	5.9	17
Madhya Pradesh	66.1	26.7	932	43.4	42.7	36.9	4.7	5.5	12.5	111
Maharashtra	78.7	2.3	936	63.0	42.8	27.5	3.4	4.7	7.3	58
Orissa	31.5	19.5	972	48.5	37.5	29.9	3.7	5.1	11.6	123
Punjab	20.1	20.3	888	57.1	31.4	27.6	3.4	5.2	7.8	55
Rajasthan	43.9	28.1	913	38.8	38.5	33.1	4.7	5.3	9.4	83
Tamil Nadu	55.6	14.9	972	63.7	44.1	23.4	2.6	4.6	8.7	67
Uttar Pradesh	138.7	25.2	882	41.7	32.3	35.7	5.3	6.3	12.0	98
West Bengal	68.0	24.6	917	57.7	32.4	27.3	3.8	5.5	8.1	63

Source: * Census of India, 1991. ** Sample Registration System (SRS), 1990, New Delhi

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the extent of under-enumeration would not exceed 1.5 per cent. If we assume it to be around the same level as in 1981 (1.8 per cent), the corrected population of India would be around 861.5 million. Some estimates place it between 870-880 million.

Population growth

The 1991 Census indicates that the annual population growth rate has declined moderately during the 1981-91 decade - from 2.22 during 1971-81 to 2.11 during 1981-91. However, if we go by the population figures mentioned above, the growth rate would remain around 2.2.

An analysis of the decadal growth rate across the major states of India shows wide variations - from 14 per cent in Kerala to 28 per cent in Rajasthan, against the national average of 23.5 per cent (Table 1). All the four large states in the northern Hindi belt namely Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh registered high population growth rates (ranging between 23.5 to 28.1). These four states constitute 39 per cent of the country's population and the future growth pattern of India's population will be largely determined by their performance in arresting population growth.

Sex ratio

Since 1901, each successive Census except that of 1981 has shown a decline in the sex ratio. In 1901, it was 972 females per 1000 males. This has slowly but consistently declined to 930 in 1971. The 1981 Census showed an improvement (934) but again suffered a setback when it dropped to 929 in 1991 (Table 2). This shows that the reversal in the declining trend during 1971-81 was only transient and that during 1981-91, a larger number of women as compared to men had lost their lives due to various reasons including lack of accessibility to health care services[4-6] and the negligence of family members[7]. Studies show that the gender gap in terms of survival is greatest during the first five years of life when mortality is highest - about 20 times greater than that observed in the other five-year age groups[8]. Deaths of young girls in India exceed those of young boys by almost one-third of a million every year. Every sixth infant death is specifically a result of gender discrimination[8].

A comparison across the states shows that during 1981-91, in five of the 15 major states of India (Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu and Uttar Pradesh), the sex ratio has dropped by five or less points, in four others (Gujarat, Madhya Pradesh, Orissa and Rajasthan), it has dropped by 6-10 points, and in one state (Bihar) it has declined by as much as 34 points. In the remaining five states (Assam, Haryana, Kerala, Punjab and West Bengal), it has registered an increase ranging between six to 15 points. It is significant however that the sex ratio has declined in all the populous states, except West Bengal.

While lack of access to health care facilities and gender discrimination are major contributory factors for the declining sex ratio, under-enumeration of females and changes in the sex ratio at birth have also been suggested as possible influencing factors[9]. However, these aspects need close examination before a firm conclusion is drawn.

Literacy

According to the 1991 Census, India's literacy rate was 52.1 per cent - 64 per cent for males and 39 per cent for females (Table 1), indicating a substantial improvement over the 1981 level of 42.5 per cent. However, in absolute terms, the number of illiterate persons has increased from 424 million to 492

TABLE 2

Sex ratio (females per 1000 males) in India, 1901-91

Census Year	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991
Sex Ratio	972	964	955	950	945	946	941	930	934	929

Source: Census of India, 1991.

million during this period. Thus, despite a considerable improvement in literacy during the last decade, India has more illiterate people today than in 1981, indicating thereby that the increase in the level of literacy is being outstripped by the growth in population. If this continues, by the turn of century India will have about half of the world's illiterate people[10].

An encouraging observation, however, is that the male-female disparity index has reduced from 0.54 in 1951 to 0.38 in 1981 and 0.27 in 1991.

Labour force

The 1991 Census also reveals that 37.6 per cent of the population is working. Of this, 34.1 per cent are main workers and the remaining (3.5 per cent) are marginal workers. A wide gap exists between male (51.5 per cent) and female (22.7 per cent) work participation. The proportion of male workers classified as main workers is 50.5 as against only 16.4 per cent of female workers.

As is the case in several other developing countries, Indian statistics on female labour force participation also suffers from major underestimation. At the time of the 1991 Census, the Registrar General of India attempted to improve these statistics by adding a few probing questions in the interviewer's manual but as the results show, this has failed to make any appreciable improvement. The proportion of workers among females increased only by 2.9 per cent - from 19.8 in 1981 to 22.7 in 1991, indicating that unless a sincere effort is made by adding a few probing questions in the Census questionnaire itself, female participation in the labour force will remain invisible[11].

VITAL RATES

Fertility

The latest SRS (Sample Registration System) results show that in 1990, India's birth rate was 29.9. The total fertility rate (TFR) was estimated at 4.1 and the total marital fertility rate (TMFR) around 5.4 births (Table 1). A comparison across states shows wide variations in the birth rate ranging from 19.0 in Kerala to 36.9 in Madhya Pradesh. Among the 14 major states which contribute about 94 per cent of the country's total population, only the four large northern states have birth rates which are above the national average. Madhya Pradesh tops the list with a birth rate of 36.9 and is closely followed by Uttar Pradesh (35.7), Rajasthan (33.1) and Bihar (32.9).

Decline in the birth rate

An analysis of the changes in birth rate shows that at the national level, during the last 30 years (1961-90) the birth rate has declined from 41.2 (1961-71) to 29.9 per 1000 population in 1990 (SRS estimates) i.e. by about 11.3 points or 27.4 per cent. This decline is very modest and a cause for serious concern. In fact, between 1979-84 the birth rate has almost stagnated around 33.7. However, in recent years a modest decline in the birth rate has been witnessed. The extent of decline varies widely across states - from 49 per cent in Kerala to 16 per cent in Uttar Pradesh (Table 3).

An analysis of the components of decline in the country's birth rate during 1971-81 shows that among the four components i.e. age structure, marital status, marital fertility and proportion of women in the reproductive ages, change in marital fertility accounted for 94 per cent of the decline[12]. The proportion of women in the reproductive age to the total population which had increased during the period had an increasing effect on the birth rate and accounted for 31.3 per cent of the change. As an increase in the proportion of women of childbearing age tends to stall the decline in birth rate even when marital fertility falls, this could be a reason for the observed stagnation or very moderate decline in the birth rate. It is estimated that the increasing trend in the proportion of women in the reproductive ages is likely to continue up to the end of this century. Therefore, to offset the fertility-increasing effect of this component and to achieve the targeted birth rate of 21 by the turn of the century, contraceptive use will have to increase substantially.

Mortality

Table 1 also presents the current death rate and infant mortality rate for India and its

TABLE 3
Change in birth rate, 1961-91

	Birth rates			Changes in birth rates					
				1971-81 over 1961-71		1990 over 1961-71		1990 over 1971-81	
	1961-71 Census	1971-81 Census	1990 SRS	Amount	%	Amount	%	Amount	%
INDIA	**41.2**	**34.4**	**29.9**	**- 6.8**	**16.5**	**-11.3**	**27.4**	**- 4.5**	**13.1**
Andhra Pradesh	39.2	35.1	25.6	- 4.1	10.5	-13.6	34.7	- 9.5	27.1
Assam	48.4	NA	27.5	NA	NA	-20.9	43.2	NA	NA
Bihar	41.9	14.9	32.9	- 1.0	2.4	- 9.0	21.5	- 8.0	19.5
Gujarat	41.6	37.6	29.5	- 4.0	9.6	-12.1	29.1	- 8.1	21.5
Karnataka	39.9	35.3	27.8	- 4.6	11.1	-12.1	30.3	- 7.5	21.2
Kerala	37.5	27.5	19.0	-10.0	26.7	-18.5	49.3	- 8.5	30.9
Madhya Pradesh	46.6	39.8	36.9	- 6.8	14.6	- 9.7	20.8	- 3.0	7.5
Maharashtra	41.0	32.6	27.5	- 8.4	20.2	-13.5	32.9	- 5.1	15.6
Orissa	41.3	36.4	29.9	- 4.9	11.9	-11.4	27.6	- 6.5	17.8
Punjab	36.9	32.3	27.6	- 4.6	12.5	-9.3	25.2	- 4.7	14.5
Rajasthan	42.7	43.6	33.1	+ 0.9	2.1	- 9.6	22.4	-10.5	24.1
Tamil Nadu	36.8	29.5	23.4	- 7.3	19.8	-13.4	36.4	- 6.1	15.4
Uttar Pradesh	42.5	45.0	35.7	- 2.5	5.9	- 6.8	16.0	- 9.3	20.7
West Bengal	44.3	35.0	27.3	- 8.3	18.7	-17.0	38.4	- 7.7	22.0

Source: Report of Expert Committee of Population Projection (1985)

a Birth rates for 1961-71 and 1971-81 are estimated by Reverse survival method

b Birth rate for 1990 are SRS estimates

major states. According to SRS estimates, the death rate in 1990 was 9.6 per 1000 population - 10.4 in rural areas and 6.7 in urban areas. The death rate for the decade 1981-91 has been estimated to be around 11.5. In 1970, it was 15.7; it declined to 12.6 in 1980 and further to 9.6 in 1990.

The increase in life expectancy over the last four decades is given in Table 4.

On the basis of the latest Census results and SRS estimates, life expectancy at birth was estimated at about 58.3 years for males and 59.0 years for females[13]. This is lower than the estimates anticipated by the Standing Committee of Experts i.e. 59.4 and 60.4 years respectively. In other words, the assumption made by the Expert Committee that life expectancy will continue to increase every year by 0.5 years for males and 0.55 years for females needs close scrutiny.

Infant mortality

The latest round of SRS[14] places the infant mortality rate (IMR) of the country at 80 per 1000 live births - 86 in rural areas and 51 in urban areas. The diversity of the country is also reflected in the infant mortality rates. As Table 1 shows, the IMR varies from a low of 17 in Kerala to a high of 124 for Orissa. Other states with high IMRs include Madhya Pradesh (111), Uttar Pradesh (98), Rajasthan (83), Assam (77), and Bihar (75). Punjab (55)

TABLE 4
Expectation of life at birth

Year	Mid-point	Life expectancy at birth in years	
		Male	Female
1961-71	1966 (Sept)	46.4	44.7
1971-81	1976 (Sept)	50.9	50.0
1981-88	1985 (Jan)	55.9	56.1
1991		58.3	59.0

Source: Natarajan, K.S., 1991

and Maharashtra (58) have been relatively more successful in reducing infant mortality.

The gap between rural and urban IMRs is considerable in Karnataka (42 point difference), Madhya Pradesh (58 points), Orissa (59 points), Tamil Nadu (43 points) and Uttar Pradesh (37 points).

A comparison of current infant mortality rates with those in earlier years shows that after a period of almost stable levels (around 105) during 1982-85, the IMR has started declining quite rapidly. This decline is largely due to health interventions in the form of universal immunisation and promotion of oral rehydration therapy to control major infectious disease and diarrhoea respectively. Studies show that the decline in IMR is largely due to a drop in the level of postnatal deaths while neonatal mortality has remained by and large unchanged. This suggests that once the IMR is reduced to a level of 60, further declines will be difficult unless socio-economic interventions are introduced along with health interventions.

FAMILY WELFARE PROGRAMME

India has the distinction of being the first country in the world to launch a government family welfare programme as far back as in 1952. Since then, the family planning programme (now known as the family welfare programme) has expanded considerably as can be judged by the fact that the budget outlay has increased from a mere Rs. 6.5 million in the first Five-Year Plan to Rs. 32,560 million in the Seventh Five-Year Plan (1985-90). At the grassroots level, family planning services are integrated with a package of health and maternal and child health care services. In rural areas, these services are provided through a network of about 131,000 sub-centres (SCs), 21,641 primary health centres (PHCs) and 1,916 community health centres (CHCs), while in urban areas they are offered through urban family welfare clinics, post-partum centres and hospitals. In addition, in both rural and urban areas, the condom is also available through social marketing channels.

The contraceptive prevalence rate (CPR) has increased from a low of 9.4 per cent in 1970 to 44.1 per cent in 1991. As in other cases, wide variations exist among states - from 26 per cent in Bihar to 76 per cent in Punjab. The six states which have already achieved a CPR of over 50 include Punjab (76 per cent), Gujarat (58 per cent), Haryana and Tamil Nadu (57 per cent), and Kerala and Maharashtra (56 per cent). States which have CPRs of 35 or less include Assam (28 per cent), Bihar (26 per cent), Rajasthan (29 per cent), Uttar Pradesh (36 per cent), and West Bengal (34 per cent) (Table 5).

Impact of the family welfare programme

The family welfare programme has succeeded in increasing family planning acceptance in the country. During 1970-80, the average annual increase in CPR was around 1.3 percentage points. During 1980-90, it was higher - about 2.1 percentage points. However, the impact of the programme as measured in terms of a decline in the birth rate, is modest and below the expected level. As indicated in the earlier section, despite an increase in the CPR, for quite some time, the birth rate remained stable and only recently has some decline been observed.

The impact of the programme is modest largely because -

1. some of the impact has been neutralised by the increasing proportion of females in the reproductive age groups which tends to increase fertility, and
2. it over-emphasises family planning targets, particularly that of sterilisation. Due to the pressure of achieving targets, family planning workers mainly concentrate on motivating older couples who already have many children, often more than they actually desire, for sterilisation. Consequently, young couples of lower parity tend to be largely neglected. The concept of birth spacing thus has never received a serious thrust under the programme.

Recently, realising the fact that sterilisation alone cannot help achieve population goals, the achievement of targets for spacing methods is also being emphasised. However, due to the continued pressure and the priority given to sterilisation targets, no significant difference in the functioning of the workers has been observed. Thus, while they continue

TABLE 5
Performance of family planning in India

State	Contraceptive prevalence rate (CPR)			Average annual increase in CPR		Level of unmet need 1990*	Share of sterilisation in FP acceptance 1990-91
	1970	1980	1990	1970-80	1980-90		
INDIA	**9.4**	**22.3**	**43.3**	**1.3**	**2.1**	**18.3**	**69.5**
Andhra Pradesh	9.4	25.6	42.9	1.6	1.7	15.2	81.3
Assam	5.1	19.3	28.2	1.4	0.9	25.2	91.9
Bihar	4.8	12.4	26.3	0.8	1.4	21.7	84.8
Gujarat	11.0	31.3	56.5	2.0	2.5	11.6	69.7
Haryana	11.2	29.1	58.9	1.8	3.0	11.1	54.9
Karnataka	9.2	22.3	46.0	1.3	2.4	20.1	82.8
Kerala	13.9	28.9	54.4	1.5	2.6	7.6	82.7
Madhya Pradesh	9.2	21.7	35.4	1.3	1.8	18.7	68.9
Maharashtra	14.6	34.5	54.4	2.0	2.0	10.6	77.2
Orissa	12.3	26.9	40.7	1.5	1.4	12.0	77.1
Punjab	17.2	23.5	73.2	0.6	5.0	10.4	52.9
Rajasthan	4.9	13.3	30.0	0.8	1.7	22.3	73.0
Tamil Nadu	12.5	28.2	57.1	1.6	2.9	16.2	77.9
Uttar Pradesh	5.5	11.5	33.3	0.6	2.2	25.9	58.7
West Bengal	9.5	21.4	33.1	1.2	1.2	18.5	86.7

Source: E & I Division 1991 (15); * ORG 1990 (16)

to promote sterilisation, the achievement of targets of spacing methods is often over-reported. In this context, it is interesting to note that even the poor performing states like Bihar, Uttar Pradesh and Madhya Pradesh show a 100 per cent achievement of targets for the IUD, pill and condom, though independent surveys do not support such performance. For example, concurrent evaluations conducted by different independent agencies showed major discrepancies between reported cases of temporary methods and actual acceptance all over the country. A similar observation has been made by Visaria and others[17] in Gujarat. This is also supported by the fact that during 1980-90 the increase in acceptance of temporary family planning methods was almost negligible.

The Third All India Family Planning Survey shows that only 1.9 per cent of the eligible couples in 1990 as against 1.1 per cent in 1980 were using the IUD. The corresponding figures for condom and pill use were 5.3 (1990) and 5.7 (1980), and 1.4 (1990) and 0.9 (1980) respectively[16,18]. At the national level, the share of sterilisation among family planning acceptors is 69.5 per cent, followed by acceptors of the IUD (14.6 per cent), conventional contraceptives and pill (15.9)[15].

Numerous studies carried out in India clearly indicate that the programme suffers seriously from a lack of decentralisation in the planning process; poor credibility of the programme and its workers at the grassroots level; lack of accessibility to spacing methods in remote areas; poor quality of services measured in terms of availability of choice, counselling, follow-up, competence of workers, and client-provider relationships[18-23]. Unless these programme limitations are seriously tackled and rectified, the programme may not make the desired impact.

At the community level, high illiteracy among women, social restrictions on their movement and lack of power in family decision-making (including control over their reproduction) coupled with a general strong desire for a second son makes it further difficult for the programme to function effectively.

New directions

It is encouraging to note that the recent document[24] of the Ministry of Health and Family Welfare entitled "Action Plan for Revamping the Family Welfare Programme of India" recognises most of these problems and intends to take a number of steps to remove these bottlenecks and strengthen the family welfare programme. Some of the salient points of the Action Plan are:

1. Emphasis on consolidation of the existing infrastructure and optimising its use rather than opening new PHCs/sub-centres.
2. Training and re-training of medical and pharmaceutical staff, a major concern being improvement in quality of care.
3. Special programme emphasis on the 90 districts which are backward and have high birth rates (39 in 1981). Eighty three (92 per cent) of these districts are in the four large, low-performing northern states. Motivated officials with excellent service records will be posted in these districts. Need-based micro-level planning and enhanced allocation of resources have also been recommended.

. A new package of incentives and disincentives including the withdrawal of incentives to Government employees for accepting contraception, the introduction of some form of disincentive for them as well as for organised sector employees who do not accept family planning, and the withdrawal of incentives to motivators (as it only helps in promoting sterilisation).

5. Revamping of IEC activities particularly in the 40 per cent of remote areas which do not have access to any mass media.
6. Introduction of new contraceptives like Norplant-6 and injectables to provide a wider choice of family planning methods.
7. Enhancing the involvement of NGOs by increasing the allocation of funds for implementing family planning programmes through NGOs; simplifying the procedure for giving grants to NGOs both at the state and district levels; involving village organisations like Mahila Swasthya Sanghs, Mahila Mandals, Zilla Parishads, Panchayats etc.
8. Special attention to inter-sectoral co-ordination for creating a social environment which is conducive to the acceptance of the small family norm. More specifically, increasing functional literacy particularly among females, creating more employment opportunities and income-generating activities for women and so on.

Some of the recent major initiatives of the government with financial assistance from international agencies like the UNFPA, World Bank, USAID etc. which would help expedite the implementation of the new Action Plan include: strengthening of training facilities for family planning workers, building of new sub-centres/PHCs to ensure implementation of the prescribed norm, strengthening facilities for safe motherhood and reproductive health care of women, increasing the production of condoms and the Copper-T to make the country self-sufficient etc. A major ten-year initiative with financial assistance from USAID is under negotiation. It is expected to make a concentrated effort to promote family planning, particularly spacing methods, in Uttar Pradesh, the most populous state (139 million) of India; in terms of population Uttar Pradesh could be taken as the seventh largest country in the world.

Role of Operations Research

Operations research which helps programme managers to identify problems and find suitable solutions plays a crucial role in ensuring the efficient implementation of the new Action Plan for the family welfare programme. The Action Plan envisages new initiatives and the use of innovative approaches for strengthening service delivery and improvements in the quality of care provided by the programme. Several operations research projects which have been recently launched to develop and test alternative delivery models for increasing the accessibility and acceptability of spacing methods would go a long way in strengthening the family welfare programme. Some examples of such projects are:

1. Using village dairy co-operatives for making family planning services available at the doorstep of villagers (in Bihar, Gujarat and Rajasthan).
2. Using private medical practitioners to promote family planning particularly oral contraceptives pills (in Gujarat).
3. Increasing accessibility of services by mobile education and service units (in 13 states

and one union territory of India).

4. Using the community based distribution (CBD) approach to increase the use of the condom and pill (in Uttar Pradesh).
5. Strengthening MCH care and using the risk approach to ensure safe motherhood and to generate demand for contraception (in six states).
6. Integrating rural development with the family welfare programme (in several states).

All these operations research projects are quite promising and are expected to give significant leads for strengthening the programme and promoting spacing methods. The projects also provide examples of how NGOs like the Family Planning Association of India, the Indian Medical Association, dairy co-operatives, and major research institutions like the Indian Council of Medical Research, the Population Council, etc. can help the government in its efforts to improve the family welfare programme by developing and testing alternative strategies for promoting family planning which are replicable and economically viable. It is hoped that with the speedy implementation of the new Action Plan, such partnership will further increase.

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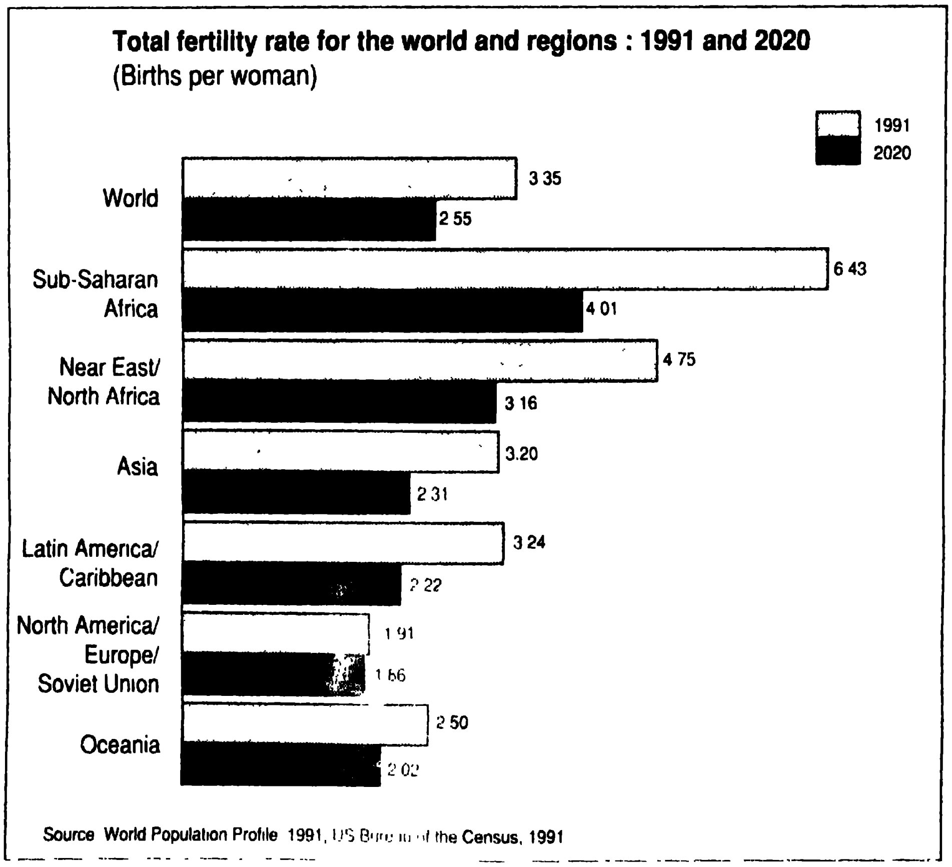

Total fertility rate for the world and regions : 1991 and 2020
(Births per woman)

Source World Population Profile 1991, US Bureau of the Census, 1991

Women in Sub-Saharan Africa are projected to have two fewer births on average, by 2020. Declines are anticipated in other developing regions as well, with the world rate falling from about 3.4 births per woman in 1991 to about 2.6 in 2020. In North America and Europe, where fertility is already below two births per woman, little change is anticipated in the forseeable future.

Malur Integrated Rural Project: The experiment and the experience

Mrs. Leelavathi Chandrashekar

An indifferent welcome

It was hot and dusty. The rains had failed again. The faces around looked anxious. Memories of mishaps stemming from a zeal to meet targets in the neighbouring states were still fresh in their minds. The leaders were definitely not interested in family planning. An officer whispered, "There are no takers for any programme, least of all yours. These people are stupid and stubborn". The prospect looked bleak.

FPAI had just stepped in on an invitation from the Government, to take up family planning in Malur Taluk a Block with 334 villages, in the state of Karnataka. One of the five strategies of the India Population Project aided by the World Bank, this was the first time ever, that Government work had been entrusted to a voluntary agency.

Facing the challenge

Small and marginal farmers, and landless labour made up the Taluk's population of 1,41,000 as per the 1981 Census. Just a few families were well-to-do. Dry tanks, cart-tracks, bare landscape, indifferent people met the eye.

The absence of positive leadership, ignorance of Government schemes, and the lack of interest of the functionaries was evident. Rapid development occurring in nearby areas, had hardly caused a ripple. Time stood still in Malur, the most backward Taluk in Kolar district.

The Malur Integrated Rural Project with guidance from FPAI Headquarters and help from IPPF, faced the challenge. Strategies were framed to suit the specific thrust areas. With five Community Welfare Workers, a Programme Co-ordinator, a Project Director and a Liaison Committee of five well-known local volunteers, the Project worked hard for three years. The experiment ended on a note of success.

The care and concern shown for family planning acceptors including adequate follow-up services paid dividends. The attention given to mother and child health with nourishment and immunisation for the promotion of health and prevention of illness was appreciated. The health check-up camps, the well-baby clinics, and the specialist services, were welcomed.

The community became convinced of the credibility of the Project, when the liaison established between the State and Central Governments and the NGOs and the community was diligently strengthened. Barriers crumbled, doubts were dispelled, and objections melted away. The common man understood that a small family is feasible, enjoyable and will lead to a better quality of life. Thanks are due to the efforts of dedicated local volunteers, who were identified and trained by the Project to take the message of the small family norm to the people. People had come closer and entreated the Project to walk a few more steps with them on the path to progress. Entry

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points multiplied.

Catalysing community participation

The holistic approach to development, focussing attention on the social determinants of population growth, instead of family planning in isolation, appealed to the opinion leaders. They helped to revive youth groups. Young men came together, knit themselves to form youth clubs in more villages. They enthused their sisters and mothers to do likewise. Today, there are 260 youth clubs and 185 mahila mandals (women's clubs).

Members of these local voluntary groups listened to what the Project staff, extension educators, health personnel and social workers had to say. They questioned, argued, understood and began to plan and execute programmes in social ecology, pollution, conservation and technology transfer to ensure integrated development.

Women gathered around a sewing machine and, as they sewed, they listened to talks on health and family planning, watched demonstrations of nutritious recipes, got their children immunised and learnt arts and crafts.

Relevant information was given to facilitate the formation of healthy aspirations. Charts, exhibitions, film shows, songs and role play hastened assimilation. Education threw open the windows to the world outside, letting ideas flow in. Wisdom followed, knowledge and attitudes changed. The desert bloomed.

Malur today

Trained to assess and prioritise their needs, the local voluntary groups were guided to contact Government functionaries to obtain programmes. Banks and voluntary agencies were brought in by the Project to assist them. The growth potential was tapped with care, to strengthen the roots and basic values. Self-awakening led to resource mobilisation, be it of men or material or money. Now, transport and communication are better. Roads are usable. Tanks have been de-silted. Every village has drinking water and electricity. Temples have been repaired and schools built.

Training for rural youth in self-employment and integrated rural development programmes have reached the needy. Dairying, sericulture, poultry and fishery augment agricultural income. Bee-keeping and mushroom cultivation are on the increase. Fair price shops are run largely by the local voluntary groups. Food preservation, save grain campaigns, the use of fertilisers and pesticides are gaining in popularity. There is visible socio-economic progress.

Whole villages are becoming literate with the momentum given by the local volunteers when the literacy mission was launched. Libraries have been established in many villages. There are very few school drop-outs. They are now taught by student volunteers. Child labour is absent.

All the 16 high schools and three colleges in the Project area have Population Education Clubs. The Project has also brought in the Integrated Child Development Scheme. The tiny tots form the school-going habit early in life. Apart from these 143 nurseries, the local voluntary groups run 23 balwadis (pre-primary schools).

'Hitaishi', the Middle School class leaders monitors the health of his/her classmates in some schools. Members of *'Kishori Kootas'* (girls groups - age 10-13 years) are active in their villages, checking on immunisation, teaching the illiterate, campaigning for small savings, and educating parents on the importance of the health and education of girl children. Youth and women's groups, persuade parents to get their daughters married later and without a dowry; the mean age at marriage is 25 years for males and 21 years for females.

The family planning outcome

Family planning is considered as a health measure first. Personal hygiene, healthy habits, sanitation, pre and postnatal care, and immunisation are given due importance. The local voluntary groups arrange meetings for young couples, to exchange views on contraceptives, family life and size of the family. Newlyweds take an oath in public to postpone their first child. The local voluntary groups distribute contraceptives and keep a close watch on the couples. Follow-up of acceptors of spacing and permanent methods is as devotedly done as persuasion for acceptance of a small family, and model couples are felicitated in public. The contraceptive prevalence rate is 70 per cent. The crude birth and death rates are 21.97 and 5.22 respectively, and the infant mortality rate is 21.65 per 1000 live births. As health consciousness is high, the services of health workers are in great demand.

Dais, the grass root level voluntary health workers are special people in the Project villages today. Four hundred *dais* have been trained and given a kit for delivery. They refer women for registration, immunisation and family planning. They are publicly honoured for exceptional work, with a sari, by the local voluntary groups. There is not a single case of maternal mortality in the area.

With the availability of reproductive choice, the fertility span has become shorter. Families are completed with one or two children within five to six years of marriage. Women are accepting sterilisation around 26 to 28 years of age. The number of eligible couples is now lower. The population growth rate is 1.67.

New opportunities for women

Women have time and energy for activities other than the usual and clamour for gainful employment. Women-oriented schemes are fully utilised. Many groups offer credit facilities for developing entrepreneurship. Manjula, the first woman entrepreneur in the entire district of Kolar, is from Lakkur, a village covered by the Malur Project.

Petty shops and mini-production centres are springing up. The supplementary income has helped raise the position of women, the health of children and the standard of life of families. Women have entered the mainstream of development. Like the young men, they have successfully contested Panchayat elections. Sensitisation to women's issues has grown with their participation.

The man-environment link

The close relationship of man to environment and ecology is well understood. Gobar gas and smokeless chulhas (stoves) are seen all over the Project area. Solar cookers are coming in too.

Shauchalayas (latrines) are being built in schools by the community. *Vanamahotsava* (tree planting) is a must when it rains. School gardens and social forestry are catching up. Malur is getting greener.

Malur's unique villages of sculptors or vaidyas or landscape gardens have attracted people from afar. Now the Taluk has a number of villages with total acceptance of family planning or with complete immunisation, or 100 per cent literacy. There are 'no drink' and 'no smoke' villages where neither people nor the stoves smoke. There are smokeless chulahs in every house. In some Project villages, every family has a bank account. In a few villages, every household supports a scientifically constructed storage bin. And so on and so forth.

A rewarding experience

Disappointments and setbacks faced by the Project over the period, have paled into insignificance, as today, the people here firmly believe that family planning is essential for health, happiness and development. With families becoming smaller, the concept of the global family *(Vasudha eva kutumbakam)* is catching up.

FPAI, the initiator and facilitator, is now the appreciative spectator. The experience has been exhilarating.

EUROPE REGION

Member Associations:

- Austria
- Belgium
- Bulgaria
- Cyprus
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Luxembourg
- Netherlands
- Norway
- Poland
- Portugal
- Sweden
- Turkey
- United Kingdom
- USSR
- Yugoslavia

Characterised by relatively low fertility (around two children per woman), the FPAs in the IPPF Europe Region work in very different social, economic and political environments. For instance, while countries such as the Netherlands in Western Europe and Sweden in Northern Europe are world leaders in innovative sexual health programmes for young [illegible] high fertility level, and Italy and Spain have to work within the constraints of the Catholic Church. The economic recession experienced [illegible] d by problems of unemployment and cuts

Advocacy

- The FPAs are forceful advocates of sexual and reproductive rights. They network with other active organisations to find common ground. A recently formed Task Force on the Involvement of Women has identified three issues as priority for the Region.
- In Poland, a Federation of groups interested in planned parenthood is being formed to halt the erosion of reproductive rights.
- The UK FPA concentrates its efforts on a wide variety of advocacy and information activities including the lobbying of parliamentarians, making films for television and placing articles in newspapers and magazines.
- In 1991, the Region co-sponsored a conference attended by parliamentarians from 20 countries which drew up an "European Agenda for Action on World Population", and helped motivate parliamentarians throughout Europe on this issue.

Promoting Reproductive Health

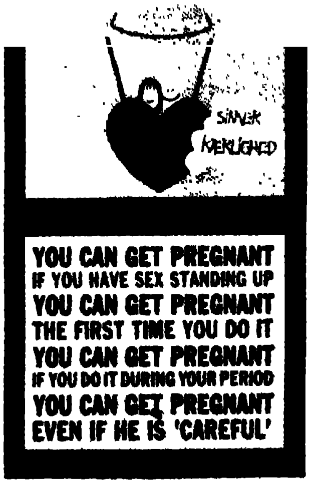
- FPAs in the Netherlands and Sweden are involved in work related to sex and physical handicap.
- The UK FPA runs AIDS awareness training courses for health care professionals, and distributes thousands of leaflets annually, all carrying an AIDS/safer sex message. AIDS prevention education constitutes a major focus area especially in Eastern, Central and Southern Europe.

The Romanian FPA focuses on training and information and education in addition to providing reproductive health care services through its model clinics.

Austria and Finland are among FPAs which are increasingly working in the areas of infertility.

Following the July 1991 decision by the UK to grant a product licence for RU486, the early "abortion pill", and Sweden's subsequent successful application, the FPAs are involved in raising public awareness about the product, and its safety and effectiveness record.

▼ A winner design of a drawing competition organised by the Danish FPA The slogan reads "Safe Love"


YOU CAN GET PREGNANT
IF YOU HAVE SEX STANDING UP
YOU CAN GET PREGNANT
THE FIRST TIME YOU DO IT
YOU CAN GET PREGNANT
IF YOU DO IT DURING YOUR PERIOD
YOU CAN GET PREGNANT
EVEN IF HE IS 'CAREFUL'

[illegible] which profoundly affect family life and sexual relationships. [illegible] Eastern and Central Europe on the other hand, have led to a surge in planned parenthood activity.

During 1991-92 the Region has been engaged in constant reappraisal and readjustments in light of the changing socio-political and economic scene, and sees its focus areas during the 1990s as advocacy of family planning as a human right, expansion and strengthening of FPAs in the Region, and the promotion of sexual, emotional and reproductive health.

▲ Women volunteers of the FPA of Turkey

The Region continues to actively monitor scientific and political developments on it.

Expanding FPAs

- In the Czech and Slovak Federal Republic, new Associations have been formed in Prague and Bratislava, which will work closely on key planned parenthood issues.
- Associations in Iceland, Romania and Switzerland are on the point of seeking membership, and Albania has taken the first steps to form an Association.
- The Region is engaged in vigorous resource mobilisation efforts to assist FPAs to make the most of opportunities that have become available as a result of political changes.

Young People & Women

- In Portugal, where 10-16% of all births are to young people (15-19 years), the FPA takes sex education to both in-school and out-of-school youth. It also trains teachers, youth workers and health professionals.
- In France, the Netherlands and Sweden, planned parenthood for immigrants is an important area of work.
- In Turkey, women volunteers trained by the FPA pay home visits to motivate potential users, supply condoms and foaming tablets and refer for other methods, and to provide basic instruction in maternal and child health.
- In Finland where family planning services are provided by the State, the FPA's family clinics respond to a wide range of other family needs - emotional, sexual, medical or legal. Its Open House offers free confidential advice to young people.

▲ Volunteers holding some of the Polish FPA's publications

- A successful women's in-company health service launched by the Irish FPA offers breast examination, including teaching self-examination, cervical smear tests and information about the advantages of family planning to women who might not otherwise visit family planing clinics.

POPULATION PROFILE

Population estimate mid-1992 (millions)	611.1
Percentage rate of natural increase	0.4
Infant mortality rate (per 1000 live births)	19.2
Total fertility rate	1.9
Percentage population under 15 years	21.5
Percentage married women using contraception*	58.5
Per capita GNP in US $ (1990)*	12184

The values are weighted averages.
*Excludes any country for which figures were not currently available

Family planning: A health and development issue

Dr. (Miss) Eimi Watanabe

In the 1992 State of the World's Children Report, Mr. James P. Grant, Executive Director of UNICEF made a call for a new world order. He put forward ten propositions for the consideration of all those who will be involved in the discussion of the new world order. Nine of tnem covered such issues as the prerogative of children to have a first call on a nation's resources, the imperative of all countries to combat malnutrition and illness and an appeal to oppose the apartheid of gender.

The tenth proposition refers to family planning. He said that "the responsible planning of births is one of the most effective and least expensive ways of improving the quality of life on earth - both now and in the future and that one of the greatest mistakes of our times is the failure to realise that potential".

Family planning - A health issue

Family planning is being recognised as one of the most important issues in the developing world not only as a population "numbers" problem but as an issue which affects the health and lives of millions of women and children. The full range of the benefits available for the responsible planning of families to the family itself has often been hidden from public view by religious, socio-cultural and ethical controversies. But many countries including India realise that for the efforts of development to reach everyone in an impactful way, families need the information and easy access to simple technologies to plan the size of their families effectively. In today's world, such information and technologies are widely available. We have to ensure that they are desired and reach everybody.

Ensuring child survival and mothers' well-being

When child death rates are high, many parents compensate for the anticipated loss of one or more children by giving birth to more children than they actually want. Compounded with gender preference, this "insurance effect" is a major reason for the persistence of high birth rates. Reducing child death can therefore help societies move towards family building by design rather than by chance. The confidence factor is an important one. Since families cannot predict the number of surviving children they are afraid to accept the idea of restricting family size. On the other hand, when child death rates fall and the relationship between the number of births and eventual family size becomes more predictable, planning becomes a more reasonable proposition. Improvement in child survival, therefore, will increase the acceptance of family planning.

Conversely, UNICEF also recognises the fact that the death of infants and mothers could be reduced by an estimated 25 per cent through avoiding births which are too many or too close to mothers who are too young (under 18 years) or too old (over 35 years). Hence, family planning is both the cause and effect of child survival and mothers' well-being.

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It is estimated that about 500,000 maternal deaths take place every year in the world. Of this, a fourth are estimated to take place in India i.e. about 125,000. All of these deaths occur following complications of pregnancy and child birth. By preventing unwanted pregnancies, we automatically prevent complications and deaths. Thus, good family planning alone will reduce maternal deaths by 25 per cent. Furthermore, for every woman who dies from child birth, it is estimated that 16 more women suffer damage to their health - many of them painful, embarrassing, secret and permanent, lasting the rest of their lives. If only they had access to such family planning methods which they can trust and understand, women need not die so tragically and suffer so silently.

It is also estimated that about more than 50,000 illegal abortions take place every single day all over the world and at least 150,000 young women die every year from abortions performed clandestinely in totally unhygienic circumstances. If only family planning information and services had been made available to them in a way which was comprehensive and accessible, these tragic deaths and the consequent national waste of human resource potential need not have taken place. As Dr. Nafis Sadik, the Executive Director of UNFPA has pointed out, "If we could make family planning services available to all women who want them, 25 per cent or more of maternal deaths could be prevented. ...If women could choose to have the number of children they want and no more, the number of births would fall by a third in Latin America and Asia, and by 17 per cent in Africa. Maternal mortality would fall by at least an equivalent proportion."

Family planning not only reduces infant and maternal deaths, but has a major impact on the quality of their lives. Family planning and birth spacing give a woman a much-needed chance to recuperate her health and spend quality time in caring for the health of her baby. It gives the baby a better chance of survival. The baby will have the full attention of a healthy mother who can also breastfeed longer, which means fewer illnesses for the baby. Having fewer children and spacing them apart also gives the woman a chance to improve her own quality of life.

IMPROVEMENT OF WOMEN'S STATUS - FEMALE EDUCATION

Low social status and educational levels among women expose them to everyday hardships and discrimination, which is today the single most important barrier to the improvement of their own and their children's health. Education of women, by formal or non-formal means, is one of the most crucial determinants of their social and economic status, as well as their children's health and survival. It is also one of the most powerful factors in reducing birth rates. The survival chances of a child born to a woman with four or five years of primary education are significantly greater than those of a child born to a woman who has never been to school. This is because an educated mother is more likely to be aware of the choices before her and to decide, to be confident enough to seek help when needed and, to have more control as to when she will bear children and how many.

Primary education although considered every child's right, is not universally available. Particularly, girls are the ones who drop out early or are kept out of school. Globally, UNICEF is working with the Governments in collaboration with UNESCO in advocating and promoting universal primary education. Within this goal, it is most important to ensure that all girls have a chance to go to school and stay at school so that they are not married too early. Literacy and education also provide young girls with life-saving knowledge and awareness which will enable them to grasp and practice all facts for life with confidence and self-reliance.

UNICEF'S ROLE IN FAMILY PLANNING ACTIVITIES

UNICEF is committed globally to supporting family planning within the child survival and development activities. UNICEF in collaboration with UNFPA, WHO, UNDP, the World Bank, other donors and NGOs is involved in a wide range of activities both within the MCH context as well as the other sectoral programmes aimed at improving the survival and development of children and women.

Child survival and safe motherhood

Family planning and birth spacing have become an integral part of the Child Survival and Safe Motherhood (CSSM) initiatives. In India, the CSSM programme which is supported by UNICEF covers essential interventions such as immunisation, oral rehydration therapy, acute respiratory infections and Vitamin A for the child and ante-natal care, prevention and control of anaemia, clean delivery services and emergency obstetric care for the mother. Along with these, one other critical input is creating access to quality family planning and spacing care.

Family life education, training of health workers in communication skills, contraceptive techniques and interpersonal communication with mothers when they come to the mother-child protection session are the other major interventions. In many states, the idea of making contraceptives available at the village level is considered an important activity. Community based depots set up at the village level will stock contraceptives supplied by the Government of India to improve access to the individual family and also to pass on vital child spacing information to the family on a regular basis. The community based depots will also be used for stocking oral rehydration salts.

Information, Education and Communication

UNICEF has traditionally supported IEC activities in many spheres. In the family planning context, the two important areas of UNICEF's work are support to advocacy and communication for increasing the age at marriage, giving better care for adolescent girls, promoting a two-child family norm, and to communication activities for creating a demand to avail of all services.

Age at marriage

One of the first tasks in advocacy is aimed at increasing the age at marriage of girls. In the most populous states in India, the age at marriage has remained consistently low over the last twenty years. Even a two to three year increase in the age at marriage of girls from 15 years to 18 years, will bring about dramatic gains in fertility reduction and improved maternal and child health. Advocacy for increasing the age at marriage is therefore a major item on UNICEF's agenda.

Adolescent girls

Most adolescent girls in India have virtually no education and have a burdened childhood. They are considered to be a burden to the family's resources as dowry has to be paid and are considered a security risk once they reach puberty. Hence they are married off as soon as they reach puberty or even earlier in many states.

UNICEF with the Government of India is trying to address the problems of adolescent girls by providing them with non-formal education and vocational training. Giving an opportunity for adolescent girls to be gainfully employed may also motivate their families to keep them at home rather than marrying them off too early.

Two-child family norm

Preference for sons is still predominant in most Indian communities, leading to large family sizes. Thus, one of the major advocacy areas is to inform and educate communities and families of the various avenues open for educating and training girls, and the overriding advantages of a small family size.

Communication

Communication activities, needless to state, are the pivot of large-scale community programmes, including family planning. A large survey in India indicates that 90 per cent of the people are aware of family planning, 60 per cent are inclined to accept family planning, but only 44 per cent actually practice family planning. The challenge of converting this latent demand falls on communication. Communication for family planning will address issues regarding access to quality services, advantages of spacing and timing, female education, increasing age at marriage etc.

Conventionally, MCH and family planning programmes all over the world are targeted towards women, as they are considered the prime beneficiaries. Most contraceptive technologies have also been concentrated only in controlling or interrupting the fertility of women. The time has come in India when men should assume equal responsibility both as participants in practicing family planning themselves by using condoms and other methods as well as in supporting their wives in their desire and decision to have small families. Communication efforts will be focussed to address this important concern. All these areas of work in which UNICEF is supporting the Government of India are synergistically related.

Conclusion

In conclusion, UNICEF believes that the benefits of family planning extend well beyond population control. Well-informed timing and spacing of births is a critical input for improving the health and saving the lives of both women and children in the decades ahead. This can best be achieved through an integrated approach by ensuring child survival to build the confidence factor, by bringing about improvements in the overall status of women, including her education, as well as by ensuring universal access to family planning information and services.

Safe Motherhood South Asia — Challenge for the Nineties

In South Asia, 300,000 women die every year while giving life. For every woman who dies, many more suffer serious illness or permanent disability. Only 27 per cent of the world's births occur in South Asia, but our region accounts for over one half of all maternal deaths. While there are countries and areas in South Asia which have made dramatic gains that provide examples of how to prevent this tragedy, in much of the region the suffering and premature death of women have been ignored or passively accepted for too long.

As mothers, educators, and producers of goods, women play a pivotal role in our common struggle for development. Yet they have benefitted little from socio-economic progress. Ignoring their needs and neglecting their health compromises our development efforts. This problem is reinforced by the general development patterns in the region, which do not adequately address the social sector.

The direct medical causes of maternal death are well-known. These deaths, however, are rooted in traditional customs and practices which give preferential treatment to boys in nutrition, education, and access to health care. Girls are married off at an early age, and are expected to bear children when they are still children themselves.

Women's drudgery is interrupted only by repeated pregnancy. Too many pregnancies, too close together, sap them of their strength and their will. Though many women want no more children, or would like to delay their next pregnancy, they have little or no access to quality family planning information and services. The thousands of deaths from unsafe abortion serve as a painful indicator of the prevalence of unwanted pregnancy and the shortcomings of existing family planning programmes.

Malnutrition and anaemia are common afflictions for women in our region. Health facilities are often inaccessible - financially, geographically, or culturally - or of poor quality. Far too many deliveries take place without the assistance of a trained attendant. Women also lack access to ante-natal services and post-natal care that could save their lives. Unsafe practices are common, and trained medical help is often sought only after life-threatening complications arise. Communications and transport systems are poorly developed, making it difficult to link a dying woman with life-saving medical services.

Too many women have died prematurely from an act as natural as childbearing. We reaffirm the Safe Motherhood Initiative's goal of reducing maternal mortality by half by the end of this decade. Achieving this goal, and thereby saving thousands of women's lives, is a challenge we must and will accept.

This Challenge was issued at the Safe Motherhood South Asia Conference, sponsored by the IPPF in cooperation with the government of Pakistan and held in Lahore, Pakistan in March 1990.. The Safe Motherhood Initiative is co-sponsored by IPPF, UNICEF, UNDP, UNFPA, The Population Council, The World Bank, and WHO.

The new Europe: Recent developments and their impact on family planning

Ms. Lyn Thomas

Recent political changes in countries throughout Eastern and Central Europe have led to a surge in planned parenthood activity, and this has now formed the focus of the IPPF Europe Region's work. Without doubt, providing technical support to Associations throughout Eastern Europe will be one of the major challenges of the coming years. Events in Eastern Europe have demonstrated that NGOs now have a clear role in the new social regimes.

A changing Europe

However, this difficult transition process from communism to democracy and from centrally guided economies to open market systems has resulted, in the short term, in its own difficulties. Unemployment rates are rapidly rising, there is a shortage of basic food and medical supplies in some regions, household incomes are falling, while at the same time consumer prices are rocketing. Under these hard economic and social circumstances, it is often the case that reproductive health care and family planning needs are not being met. Recent UNICEF/WHO missions to the Commonwealth of Independent States (CIS) Republics and Baltic States found that the family planning needs of all CIS and Baltic countries are enormous, particularly bearing in mind the vast number of women of reproductive age (70 million), the almost total absence of safe, modern, reliable and quality contraception, and a tradition of relying on abortions to control fertility.

There is a great need in Central and Eastern Europe for a transition from heavy reliance on abortion to contraception, but this process is particularly difficult under conditions where there is a lack of education and knowledge regarding contraception, and where the necessary services and supplies are still very inadequate.

IPPF Europe Region has been working with family planning organisations in Central and Eastern Europe for many years, with member Associations in the former German Democratic Republic, Bulgaria, Hungary, Poland and Yugoslavia. In other countries we are working to build new contacts, with the hope of making the planned parenthood movement in this part of the Region stronger. We aim to help to establish and support a local national infrastructure that can evolve and develop in the way that is appropriate for each country. We also provide support and training through our colleagues who work in other Associations in Europe and who are willing to share their expertise.

Creating family planning services - The first steps

Albania underwent a quiet revolution in 1991, and the Democratic Party was elected in March 1992. The national debt is US $350 million and increasing. The health service network is extensive although there are problems relating to antiquated equipment and instr-

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uments. The maternal mortality rate is 37.7 per 100,000 live births and infant mortality is 28.3 per 1,000 live births (the highest in Europe). Abortion on request was legalised in 1991. The pro-natalist policy of the communist regime has left a legacy of dependence on abortion as the primary method of family planning. Under the old regime "therapeutic" abortion was permitted in certain instances for physical or serious psychiatric problems. However, a vast number of women underwent clandestine, non-medical abortions and official statistics show that in 1989 some 10,587 cases of complications due to such abortions were treated.

A UNFPA project for the introduction of family planning services began in June 1992. Following a visit by the Regional Director of the Europe Region, plans are now underway to set up a Planned Parenthood Association in Albania.

Developing and strengthening family planning services

With the formation of independent states in the former Soviet Union, the Region is now forging links with the new Republics. Within Russia, the Region is at the moment working closely with the Family Planning Association which was established in December 1991.

The fundamental problems facing Russia in terms of family planning were a lack of knowledge concerning contraception and reproductive health and an inadequate supply of high quality modern contraceptive methods. The most obvious manifestation of these conditions is the high number of abortions. On average, every woman born in Russia has four or five abortions during her childbearing years, and more than 10 per cent of abortions are illegal. Women living in rural areas and teenagers under the age of 17 are most likely to resort to illegal abortions and they suffer the highest level of complications and mortality. The main aims of the Russian Association are to enlighten and educate people, particularly young people, to train teams of specialists, to publish materials and to set up branches of the Association in all the Russian territories. The IPPF Europe Region is assisting the Russian Association by offering technical and financial assistance, including supplies of contraceptives, other information materials, and support for training and project activities.

In Romania the Family Planning Association SECS (Society for Education on Contraception and Sexuality) has been created and built up within the last two and a half years, and its application for associate membership of IPPF is a clear measure of its success. Training and the provision of education and information services are the key areas of SECS activity, alongside the maintenance of a small number of model clinics providing reproductive health care services.

In the Czech and Slovak Federal Republic, new Family Planning Societies have been formed in Prague and Bratislava, which have come together to form the Association for Family Planning of the Czech and Slovak Federal Republic, in order that they can work closely together on key planned parenthood issues in the country. Elsewhere, work is underway in Poland to form a Federation of groups interested in planned parenthood work which will campaign to halt the erosion of reproductive rights.

The more established Associations in Bulgaria and Hungary, for example, are having to adopt new roles in response to changing political circumstances, and, in the case of Hungary, they are planning a joint venture involving the sale of condoms.

Shared problems and obstacles to overcome

The environments within which the Associations operate in the various countries in Eastern and Central Europe, and the problems that they face, vary widely between countries. For example, the role of the Church in Poland is all-important, forming the main moral focus for public policy work, while, in Yugoslavia, its influence is practically negligible. A few common themes do, however, emerge from the experience of planned parenthood work in these countries.

Economic and political instability is common to most countries of Eastern and Central Europe, as is inflation - in Bulgaria; inflation has been quoted as being between 300-500 per cent. All of these countries are experiencing difficulties with hard currency provision, such as Romania, where ministerial commitment to include family planning as part of maternal and child health care comes up against hard choices to be made when allocating scarce hard currency resources. Emerging trends towards nationalism, and emigration complicate the political context within which family planning work can be planned, while State cutbacks affect the health and social policy sectors the hardest, just at the time when op-portunities for non-governmental invol-vement in planned parenthood work are so great.

The problems caused by the lack of high-quality contraceptive commodities in many of these countries are intensified where relatively liberal abortion laws are under threat - where both factors operate at the same time, the result can only be an increase in unplanned pregnancies and births.

Another common theme is that the relatively new freedom to express and campaign for a variety of different views and causes has led to increased opposition to family planning. In Croatia, the Czech and Slovak Federal Republic, Hungary and Poland, laws which gave women the opportunity to make a decision about their fertility are being changed. Laws which either ban or restrict access to abortion are being introduced. To make matters worse, in some cases no attempts are being made to provide contraception either. In Poland, for example, a new medical ethics code regarding abortion came into effect in May 1992, allowing abortion only on extremely narrow grounds. In Hungary, it was ruled in December 1991 that the current liberal abortion regulations are unconstitutional, and the Hungarian Parliament has been given until the end of 1992 to change these regulations.

IPPF Europe Region - Future challenges

At the Regional level, the challenge continues to be to raise sufficient funds to assist Associations to make the most of opportunities that have recently become available to non-governmental organisations as a result of political changes. Difficulties created by a lack of hard currency, and the need to import oral contraceptives, IUDs and other contraceptive methods head the list of problems common to most countries in Eastern and Central Europe, which could, to a great extent be solved with the injection of relatively low levels of funds. Some donors do not believe they can provide funding for this part of the world because it is not 'developing'. In many ways this is correct, but in terms of family planning provision it is not. Basic health infrastructure exist in all these countries. There are many physicians and other trained health personnel. However, equipment is antiquated, facilities are less than ideal but they do exist. Any financial assistance could be perceived as short - term compared to 'developing' countries, because the basic infrastructure does exist.

The Europe Region declared some years ago that it wanted to have a non-governmental Planned Parenthood Association in every European country. There were fewer countries then, but the principle still holds. The process will be relatively slow because of the limited resources, but results will be achieved. With small amounts of core funding, setting up offices in each country, sharing the planning systems that have been evolved over many years and sharing experiences of other established Associations, it will be possible to build up a strong network. In our limited experience in the newly-formed democracies in Eastern and Central Europe, we know that moral support is as important as financial support. The IPPF Europe network can provide that moral support and we hope we can provide enough resources to give new Associations the conditions necessary for them to evolve steadily and to identify their own priorities in the context of their own country's situation.

World Bank: Human resources development assistance to India

Ms. Bimla Bissell

Population and health

The Bank's first involvement was in 1975. Two projects assisting the family welfare programme have been completed, and five are under implementation. The states currently involved are Kerala, Karnataka, West Bengal, Uttar Pradesh, Andhra Pradesh, Madhya Pradesh, Bihar, Gujarat, Punjab, Kashmir and Haryana, plus slum areas of Bombay, Calcutta and Madras. The scale and frequency of lending have increased considerably in the last three years, when a project a year has been developed, each over US$100m. Activities or items financed from the credits include information, education and communication (IEC), training, improvement of management systems, consultant services, additional staff, additional community, primary and health sub-centres, and additional staff, equipment, transport, drugs and medical supplies.

The overall goal is to assist the government to reduce high fertility, infant, child and maternal mortality. The project strategies to do this have changed significantly over the years. The first two projects concentrated assistance on providing additional infrastructure in selected backward districts of a few states. Project four finances additional service delivery infrastructure in backward districts of West Bengal; in addition, it seeks to strengthen systems for family welfare programme management, training and IEC on a statewide basis.

Project five seeks to improve the outreach and quality of family welfare services in the slums of Bombay and Madras, while a Bank-assisted urban development project does the same in Calcutta. A new feature of these urban projects is the availability of assistance for NGOs wishing to set up health posts and outreach systems in the slums, and for training private practitioners to play a greater role in preventive health care and family planning.

Projects six and seven involve eight of the northern states. They provide additional infrastructure, staff, equipment and supplies for service delivery, but have a special focus on building up the family welfare training infrastructure. An innovative feature of these projects will be operations research on alternative work routines and targeting systems for family welfare field workers. The aim is to develop systems which will help them to focus more on priority clients, maternal and child health, and birth spacing methods, as opposed to the current emphasis on female sterilisation. Funds are also available to support social marketing activities, and the greater involvement of NGOs in family welfare.

A First Child Survival and Safe Motherhood Project has been launched. This will assist the Government towards universalisation of immunisation, diarrhoeal disease and pneumonia control, Vitamin A prophylaxis and new-born care. It will also promote safe motherhood through strengthening of the ante-natal care, iron prophylaxis and birth spacing programmes; and development of improved systems for identification, referral and treatment of obstetric complications.

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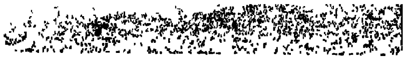

WESTERN HEMISPHERE REGION

[illegible] Antarctic, and includes an Affiliation of 19 Member Associations in many small of the Caribbean Sea as well as Suriname and Guyana on mainland South America.

There are still 30 million people in the Region who want family planning but can get it. During the 1990s, 84 million more people will be born in the Region alone, and million more women will begin their childbearing years. The unmet need for fam planning is ever-growing. In 1990, the FPAs served nine million clients including 2 milli

Member Associations:

Argentina
Barbados
Brazil
Canada
Caribbean Family Planning Affiliation
(Anguilla
Antigua & Barbuda
Aruba Bahamas
Belize Bermuda
British Virgin Islands
Curacao Dominica
Grenada Guadeloupe
Martinique Montserrat
Nevis St. Kitts
St. Lucia St. Maarten
St. Vincent
US Virgin Islands)
Chile
Colombia
Costa Rica
Dominican Republic
Ecuador
El Salvador
Guatemala
Guyana
Honduras
Jamaica
Mexico
Nicaragua
Panama
Paraguay
Peru
Puerto Rico
Suriname
Trinidad & Tobago
United States of America
Uruguay

Quality of Care

- In Guatemala, the FPA is breaking new ground in serving indigenous communities through programmes based on client interviews. And in Equador, "exit interviews" of clients, client "flow" analyses, and refresher courses in counselling skills are improving acceptor caseloads.
- In Haiti, clinic services have been upgraded by using "mystery clients" - community volunteers trained to recognise service quality.
- In 1990, a workshop on gender analysis, the first of its kind for the entire Federation, showed how the issue of gender permeates every aspect of a programme, and that clients need to be treated according to their special needs rather than through "gender-neutral" services.

Increasing Services

- University students from various disciplines volunteer a year of services to the Panamaian FPA in exchange for training and hands-on field experience. This project, helps close the age gap between the serv provider and adolescent, and amplifies its public profile.

Working with a women's organisation, the Costa Rican FPA provides family planning to women in urban slums. Physicians from the University of Costa Rica donate the time while the FPA provides contraceptives and equipment, and trains community leaders to talk about family planning.

The Mexican FPA's Community Doctors Programme helps doctors establish medical practices, includi family planning in slums and rural communities with no health care. The project is so successful that it is being adapted for use in Guatemala

FPAs in the Caribbean are combatir myths and misinformation about modern contraceptives with person counselling and information campaigns. In these islands, 20% o the women who do not want a pregnancy are not using family planning.

A network of private doctors and midwives created, trained and supplied by the Paraguayan FPA offers services to rural areas.

Working with postgraduate student the Peruvian FPA has expanded services and stimulated greater community participation in four slums plagued by guerilla activity.

Programmes for Adolescents

Twenty per cent of all children in the Region are born to adolescents; in response, programmes for adolescents are increasing.

- In a number of Caribbean countries teenagers flock to the 'Under Twen Clubs', an adolescent programme linked to a popular radio show, run by the member Associations.
- 'Gente Jovan', the Mexican FPA's

w clients through some 2,000 clinics and 25,000 community-based distribution posts. While continuing their focus on quality, innovation, improvement, collaboration, and titution building into the 1990s, the FPAs are also testing various strategies to meet owing funding shortages. Last year, the Region created a new fund, the Planned otherhood Fund, to take family planning to women who are most in need - those who ay die or be disabled by pregnancy. The goal is to raise $5 million over the next three ars and to serve one million of these women.

award-winning programme, teaches five core subjects concerning responsible sexual behaviour through a youth-to-youth outreach programme.

Collaborating with sports and recreation clubs in the barrios, the FPA in the Dominican Republic has given young urban out-of-school teenagers, a comfortable place to go to for information and services, and relies on using teens as educators.

Through a youth centre, the Colombian FPA provides information and services and trains student leaders to talk about family planning. A local foundation has financed the replication of this highly successful centre in four other areas, two of which suffer from guerilla and drug-related violence.

Belize, with 45% of its population under 15, has started a teen 'drop-in' centre with outreach programmes in schools and the community, and uses peer counsellors to talk to teens about family life.

The Nicaraguan FPA has expanded its sex education programme by collaborating with schools, the Red Cross, churches and other welfare agencies to reach young people in risk situations.

In Canada and the USA, the two most developed countries, where adolescent pregnancy rates are high, the FPAs work to counteract reduced support to existing services.

In Canada, the House of Commons voted down a motion to combat adolescent pregnancy and to provide funding to the FPA. The US Association has stepped up its public information programmes to respond to the government's shifting position on abortion even as it continues its programme to cut adolescent birth rates.

A family worker distributes contraceptive samples during a question-and-answer session at the FPA of El Salvador

AIDS Prevention

More than half of all the reported AIDS cases are in the Americas. Consequently, FPAs in the Region are active in AIDS prevention work.

- The Brazilian FPA's outreach programme for AIDS prevention reaches high risk groups who do not normally go to a clinic including prostitutes. With client input, it has developed special materials to promote condom use: community radio, T-shirts, and mini soap operas.
- The Argentinian FPA has joined other private agencies to train union leaders to talk to their members about AIDS prevention, and alcohol and drug abuse.
- Young people in Puerto Rico have been trained to lead workshops and group discussions about AIDS/STDs in schools and youth centres. The FPA also maintains a hot line service.
- The Colombian FPA offers AIDS testing and counselling through one of its men's clinics, while the Guatemalan FPA provides these services through an affiliated organisation created for the purpose.

POPULATION PROFILE

Population estimate mid-1992 (millions)	691.5
Percentage rate of natural increase	1.5
Infant mortality rate (per 1000 live births)	34.9
Total fertility rate	2.8
Percentage population under 15 years	[illegible]
Percentage married women using contraception	[illegible]
[illegible]	[illegible]

The values are weighted averages.
*Excludes any country for which figures were not currently available

Judgement on Rio

Mr. Johan Holmberg

It is easy to summarise the immediate results of the Earth Summit in Rio, but difficult to judge its long-term achievements.

It is easy to agree with the Secretary General of the conference, Mr. Maurice Strong, who said at the closing session that he was disappointed with the political commitment shown by some of the 178 nations attending. In fact, the conference result, as manifested by the documents agreed upon by its participants, falls well short of stated intentions. It represents the lowest common denominator of national interests, the inevitable effect of the UN insistence on consensus.

The treaties that were signed - on climate change and on biodiversity - are vague, lacking timetables and targets. They were significantly weakened by the United States which ended up not signing the biodiversity treaty. The statement on forest principles, originally intended as a third treaty, does not go far beyond saying that forests are important and should be managed sustainably.

The conference action programme, Agenda 21, contains many useful ideas but must be further elaborated and disaggregated to the country level to the much practical meaning. It remains largely unfinanced, since the rich countries could only be prevailed on to meet a small fraction of its costs, arguably the biggest disappointment for the poor countries. The Rio Declaration, a set of principles to guide nations toward sustainable development, was heavily compromised during negotiations. A sustainable development commission of some 50 countries was established under UN auspices to monitor progress toward implementation of Agenda 21, its functions to be specified by the UN General Assembly in the autumn.

But it would be wrong, indeed arrogant, to judge this huge conference only in the light of its short-term achievements. It has been momentous exercise in awareness-raising at the highest political level. No leading politician can any longer claim ignorance about environment and development linkages. The conference has therefore provided an important basis for future action. It should not be judged by its immediate outcome but by the process it sets in motion. It may be years before these are apparent.

The missing money

One cannot come away from the Earth Summit in Rio without realising that it set an almost unimaginable task before its participants, writes John Rowley. It put a mirror to the world, showed up all its shortcomings, and expected a transformation".

Faced with a set of global problems costed at $600 billion a year to solve (80 per cent of which was meant to come from the developing countries themselves), those without the money could only shrug while those with the money were not willing, at a time of economic

Mr. Johan Holmbergof the International Institute of Environment and Development is Editor of Policies for a Small Planet, just published by Earthscan, London. This article is reproduced from "People & The Planet", Vol. 1, No.3, 1992, a joint magazine of the UNFPA, World Conservation Union and IPPF.

uncertainty, to make large promises.

The richer countries are, at present, giving $55 billion a year in development aid. If they reach the UN target of 0.7 per cent of their national income (which some were still not willing to commit to by the year 2000) then this would amount to $125 billion, or just what is required in international assistance.

Unfortunately the donors offered only some $3 billion with a promise that they would reach the 0.7 per cent target "as soon as possible". Not much of a promise, since many have been sliding back from that goal for years. In the meantime, the billions flow from South to North in debt and unbalanced trade.

This left many of the 7,000 non-government organisations, who attended the Global Forum and infiltrated government delegations, in some despair. Their central concern is with injustice and poverty, which is killing 40,000 children a day, and with the forces that perpetuate it.

For those especially concerned with education, health and family planning to improve the lives of women, families and children and to ease population pressures, the $9 billion a year needed for population programmes by the year 2000 remains part of the total that the conference merely "noted".

Words at Rio

There was a marked contrast between the 'committee-speak' of Agenda 21 and the words spoken in Plenary session.

The nearest Agenda 21 came to plain speaking on population was in Chapter 5: "The growth of world population and production combined with unsustainable consumption patterns places increasingly severe stress on the life-supporting capacities of the planet".

And on the link with women's development the following is also from Chapter 5: "Awareness should be increased of the fundamental linkages between improving the status of women and demographic dynamics, particularly through women's access to education, primary and reproductive health care programmes, economic independence and their effective equitable participation in all levels of decision-making."

Compare this with Lady Chalker, British Minister for Overseas Development: "I am against concepts like `population control'. They are unhelpful and they cause offence .... We must agree on one fundamental principle behind all action that is taken to address population issues. My Government's position is that women and men should be able to *choose* when to have children, and *should have the means to* put those choices into effect."

Others were more outspoken. Jacques Cousteau at 80 had this to say: "The fuse connected to demographic explosion is already burning. We have less than ten years to put it out. There should be a general mobilisation to reverse the trend and to avoid the `population big bang' ...Surviving like rats is not what we should bequeath to our children and grandchildren."

Gro Harlem Brundtland, the Norwegian Prime Minister, stressed the interlinked issues: "Unless poverty is alleviated, there is no chance that we will be able to stabilise the world population. It has grown by 500 million since the (Brundtland) Commission last met five years ago. We must deal with population growth through an integrated human rights approach, including education and the enhancement of the status of women, improved public health and family planning."

Finally, the Conference Secretary-General Maurice Strong was direct: "Population must be stabilised, and rapidly. If we do not do it, nature will, and more brutally."

Church and population

Population became a central talking point among religious leaders and church groups at the Earth Summit, writes Michael Kepp.

The World Council of Churches (WCC), which is mainly made up of Protestant and Orthodox churches, came out most strongly on the need for population policies. In a pre-Summit meeting held in one of Rio's most impoverished neighbourhoods, bringing together 176 global church representatives, the WCC argued that couples should have more choice of birth control methods.

"While the Catholic Church is against the methodology of using artificial birth control to decrease population growth," said WCC

General Secretary Emilio Castro, "the WCC believes that the responsibility of choosing the methodology belongs to the couple."

And a WCC document issued after the meeting stated that "family planning information and services ought to be available as a basic right. Women, in particular, have a right to reproductive freedom and to the conditions in which choice is possible."

Vatican representative Angelo Cardinal Sodano, secretary of state of the Holy See, countered such sentiments with the Vatican's point of view when he addressed the Earth Summit's plenary body on June 13.

"Everyone is aware of the problems that can come from a disproportionate growth of the world population. The Church is aware of the complexity of the problem," he said. "But the urgency of the situation must not lead into error in proposing ways of intervening. To apply methods which are not in accord with the true nature of man actually ends up by causing tragic harm..."

Voices of the Earth

During the Rio Earth Summit an extraordinary series of meetings took place writes Herbert Girardet.

Called the "Earth Parliament", it brought together indigenous people from all over the world, as well as environmentalists, scientists and politicians.

The "Earth Parliament" showed that indigenous and traditional peoples, even if unused to microphones, are highly articulate defenders of their old-established cultures. They see a future for themselves only if their land rights can be assured, allowing them to practise their sustainable farming and collecting methods. Their understanding of the environment and its huge variety of food and medicinal plants is of great significance. Here is a knowledge of vital importance for the future of human life on earth.

Helping the street children

During the Earth Summit most of Rio's estimated 7,000 street children, most of them sidewalk vendors, were nowhere to be seen.

"Police simply told the kids that unless they left their Zona Sul hangouts, they'd haul them away," said Ana Filgueiras, with the Brazilian Centre for the Defence and the Civil Rights of Children and Adolescents (CBDDCA), a Rio-based NGO that provides health outreach to street kids. "The intimidation, for the most part, worked."

She added that now that the Earth Summit is over, most of the street kids have returned to their old gathering spots.

IPPF's affiliate in Brazil, BEMFAM, is involved with the CBDDCA's health outreach. The CBDDCA has 10 social workers and psychologists working on the health concerns of the street children. These "educators" teach them about the prevention of AIDS and of sexually transmissible diseases. They also advise young street girls how to avoid pregnancy.

Population - A priority

National policymakers should make population a priority, according to the World Bank's latest World Development Report on 'Development and the Environment'. As the second of seven suggestions "to guide action", the Report stresses: "For the sake of both development and the environment, population issues need more attention. Educating girls, enabling women to earn cash incomes and to participate fully in decision making, and investing in better-equipped and better-financed family planning programmes all allow women to determine their own reproductive behaviour."

The Report suggests that inadequate attention has been given to the environmental problems that damage the health and productivity of the largest number of people, especially the poor. Priority should be given to the one-third of the world's population that has inadequate sanitation and the one billion without safe water; the 1.3 billion people exposed to unsafe conditions caused by soot and smoke; and the 300 to 700 million women and children who suffer from severe indoor pollution from cooking fires.

It comments that the close link between poverty and environmental problems "makes a compelling case for increasing assistance to reduce poverty and slow population growth and for addressing environmental damage that hurts the poor".

The Journal of Family Welfare

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To assist wherever possible in the national programme of family planning by undertaking to carry out various activities of a complementary, supplementary or innovative nature.

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Are generalised and personal ideal family size preferences comparable?: The Sri Lankan experience

Dr. W. Indralal De Silva

Introduction

How many children do couples want? The answer is a reflection of the value attached to children within a given cultural setting as well as individual considerations. As fertility control becomes possible for more people in the world, the question of how many children are desired becomes increasingly important in population growth[1,2] studies. Research findings in the developed world have shown that family size preferences, as expressed in survey responses, closely approximate eventual fertility or completed family size[3-9]. However, there is no consensus that the same is true in most developing countries. Some have argued that the concept of family size preference, especially ideal family size, is meaningless in developing countries, lacking in validity and reliability[10-12]. According to this line of thinking, for many respondents in these countries, choosing to have a particular number of children is a meaningless idea which they have never considered before the interview, and which they do not treat as a target for action. Davis[13] believes that consequently, the responses would mainly reflect the desire to say what the respondents thought interviewers or authorities wished to hear. Contradicting this opinion, though, others have argued that with adequate probing and accurate rephrasing of questions, even illiterate respondents can be guided into giving meaningful answers[14-17]. Indeed empirical evidence on the quality of family size preference data from many WFS and other surveys shows that those data are far from meaningless[18-23].

The main objective of this study is to use cross-sectional and longitudinal data to estimate reproductive preference levels and differentials of Sri Lankan women, and more importantly to examine how different are responses to generalised ideal family size measure in 1982 compared to responses to personal ideal family size measure in 1985. In the absence of a commonly agreed upon summary indicator of preferred fertility[24], the present study will shed light

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on the usefulness and validity of fertility preferences in a society where voluntary fertility control is becoming reasonably widespread and effective, which encourages more faith in the stated preferences. Moreover the recent decline in fertility in Sri Lanka[25], as in much of the developing world, has given added importance to family size preferences, since there is no other measure which provides an equally effective index of the potential for change in family size in the developing world.

Data and their quality

The data for this study were drawn from the 1982 Sri Lanka Contraceptive Prevalence Survey (SLCPS) and its follow-up study, the 1985 Sri Lanka Contraceptive Survey (SLCS). The original survey of 1982 covered the whole of Sri Lanka (all 24 districts) and enumerated 4,500 ever married women 15-49 years old. However, owing to civil disorder, seven districts in the northern and eastern parts of the country were excluded from the 1985 follow-up survey. According to the 1981 population census of Sri Lanka, however, these seven districts constituted only 14 per cent of the total population.

As defined by the Department of Census and Statistics[26], the sample for the 1985 follow-up constituted of all 1982 SLCPS respondents who lived in the sample districts, were married at both the time of the 1982 SLCPS and the time of the 1985 SLCS, and were younger than 50 at the time of the 1985 SLCS. The 1985 follow-up study therefore necessarily covers only women who had been married for at least three years and were 18 or more years of age. Altogether the 1985 follow-up study covered 2310 respondents or 76 percent of those who were eligible. Computer and manual matching of these women with women interviewed in the 1982 survey yielded 2219 matched respondents, and provided longitudinal data for an average time lag of three years and two months between interviews. A detailed description of the longitudinal sample has been written elsewhere[27].

Ideal family size was obtained by a 'projective' type question in the 1982 SLCPS: "If a couple starts their family now, how many children do you feel is best for them to have?" Ideal number of children is also available through a more direct, personalised question in the 1985 SLCS: 'What is the total number of children you would like to have?' Some argue that the respondent's underlying preference biases her judgement about typical family size, so that the typical family size she reports is assumed to approximate her own preference[28,29]. Therefore, even though the former question refers to a generalised ideal family size while the latter refers to a personal ideal family size[29,30], there is a rare opportunity to compare them at individual and aggregate levels. Before that, evaluation of preference data is essential and this was done by using inter-item consistency analysis. This examines the extent to which responses to different questions in the same survey are consistent. At the same time the re-interviewed subsample of the SLCPS was examined to test whether it was an unbiased subsample of the full sample.

Table 1 compares responses to the question on whether more children were wanted with a created variable indicating whether ideal family size exceeded, equalled or was less than the actual number of living children. Respondents were excluded from Table 1 if they were not currently married or if they replied in the negative to the question 'As far as you know, is it physically possible for you and your husband to have a child in the future, if you want to have one?'. Respondents incapable of producing children because they or their husbands had been sterilised were not, however, excluded. These women (or their husbands) had consented to be sterilised because they wanted no more children, and were assumed to want no more.

Logically, there is no reason to expect

TABLE 1
Responses to whether more children wanted by whether actual family size equals ideal: 1982 SLCPS full sample, re-interviewed subsample and 1985 SLCS

Responses to question on whether more children wanted	Whether actual family exceeds ideal (%)				
	Actual exceeds ideal	Actual equals ideal	Ideal exceeds actual	Total	(N)
	Full sample : SLCPS 1982				
More wanted	3	8	89	100.0	(1259)
Undecided	18	33	49	100.0	(61)
Wants no more	50	37	13	100.0	(2344)
	Re-interviewed subsample:SLCPS 1982				
More wanted	3	8	89	100.0	(702)
Undecided	20	37	43	100.0	(32)
Wants no more	50	37	13	100.0	(1314)
	Follow-up sample : SLCS 1985*				
More wanted	1	6	93	100.0	(450)
Wants no more	22	58	20	100.0	(1246)

Source : SLCPS individual data tape, and longitudinal data tape 1982-85.

Note : In the calculation of actual family size, a current pregnancy is considered as a living child in order to be consistent with the 'whether more wanted' item. *—140 women who reported positively to the perceived fecundity question in 1982 reported negatively in 1985; six women also in the follow-up sample were undecided whether to have more children; they are excluded.

personal behaviour necessarily to be consistent with a generalised ideal. However, if women approximate their generalised ideals to personal ideals [29] then it is natural to expect the internal consistency of preference data to be high. Since the same respondents were asked their personal ideal family sizes at the 1985 SLCS, the results of inter-item consistency analysis could be compared with the 1982 results.

Results for the SLCPS full sample show that 89 per cent of women who wanted more children also reported ideal family sizes in excess of their actual family sizes. Throughout the analysis a current pregnancy was considered to be a living child in order to be consistent with the 'whether more wanted' item. The SLCPS re-interviewed subsample shows the same degree of consistency, while the 1985 SLCS shows 93 per cent consistency (Table 1).

If family size preferences are meaningful it can be expected that women who have already attained cr exceeded their ideal number would be much more likely to indicate that they desire no more additional children. Among respondents wanting no more children, 87 per cent reported actual family sizes that equalled or exceeded their ideals while the rest (13 per cent) in both 1982 samples reported ideal family sizes that exceeded their actual number of living children. The corresponding inconsistency level at the 1985 SLCS was higher than that of 1982: 20 per cent reported ideal family sizes that exceeded their actual number of living children. It may be that respondents who both 'want no more' and report an ideal size that exceeds the actual are in fact expressing a desire to delay the next birth rather than to stop childbearing permanently; or their circumstances at the time of the survey may have been such that they did not express a desire for more children[31-33].

In general, inter-item analysis shows that the preference data of the two SLCPS samples and the 1985 follow-up sample are fairly consistent, and also indicates similar patterns of consistency; whether the family size preference measured is generalised or personal makes no great difference in the level of consistency. Palmore and Concepcion [31] and Pullum [34] analysing preference data from the 1975 Sri Lanka Fertility Survey (SLFS), also found high consistency among Sri Lankan women on responses to a personal ideal question.

On the data quality aspect, respondents undecided on whether they wanted more children made up less than two per cent in each sample. Moreover, non-numerical responses to questions on ideal family size were rare, less than 3 per cent in each sample. If a large proportion of a sample does not answer a question, analysis is hampered because these respondents may have given very different answers from the ones given by those who did answer. Since the level of discrepancies and non-response appears to be small, it can be safely assumed not to affect substantially the validity of the overall results.

Results and Discussion

Family size preferences: Trends and correlates

As shown in Table 2 mean ideal family size declined about half a child from 3.7 in 1975 (SLFS) to 3.1 in 1987 Sri Lanka Demographic and Health Survey (SLDHS)[35]. Both surveys used the same type of question to obtain personal ideal family sizes. Since the 1985 SLCS also used the personal ideal approach estimates are reasonably comparable and clearly indicate the declining trend in family size preferences among Sri Lankan women. Although the overall mean ideal family size from the 1982 SLCPS of 2.9 children was lower than the other three survey estimates, the decline in the 1982 estimate occurred primarily among women with four or more living children. This is almost certainly due to the generalised ideal approach used in the 1982 survey: respondents were asked, "If a couple starts their family now, how many children do you feel is best for them to have?"

TABLE 2

Mean ideal family size by number of living children, selected surveys 1975-1987

Number of living children	Ideal family size			
	SLFS 1975	SLCPS* 1982	SLCS 1985	SLDHS 1987
0	2.5	2.6	2.5	2.5
1	2.4	2.5	2.4	2.4
2	2.7	2.7	2.7	2.7
3	3.3	2.9	3.3	3.1
4	3.9	3.0	3.7	3.5
5	4.7	3.3	4.2	3.9
6	5.2	3.3	4.7	4.5**
7	5.7	3.3	5.2	
8	6.0	3.4	5.9	
9	7.3	3.9	6.2	
Total	3.7	2.9	3.4	3.1
(N)	5314	2183	2048	5865

Source : Figures for 1982 and 1985 are from longitudinal data tape 1982-85. Figures for 1975 are from Lightbourne and MacDonald (1982:37-39), and those for 1987 are from the Department of Census and Statistics (1988:88).

Notes : The 1982 SLCPS estimates refer only to the women in the re-interviewed subsample, who were 15-46 years in 1982. The same women were re-interviewed in the 1985 SLCS, at ages 18-49.

* : Estimates of ideal family size from this survey refer to a generalised ideal family size while those from other surveys refer to a personal ideal family size.

** : Refers to 6+ living children.

Mean ideal family size estimates for 1982 are quite comparable with others at lower parities in 1985 where younger women are likely to predominate and a present-day generalised ideal is likely to have clear personal meaning. At higher parities where older women predominate, however, a present-day generalised ideal is likely to be largely hypothetical and not have not much personal meaning. Even though there is no specific connection, it may be noted that the total fertility rate of 2.8 observed for the period 1982-87 in the 1987 SLDHS is almost identical to the ideal family size estimate of 2.9 obtained in the 1982 survey.

There is little systematic change in mean ideal family size with age: 2.7 children to 3.2 children moving from the youngest to the oldest cohort in 1982 (Table 3). Family size preferences were examined by using 1985 follow-up survey data where the same respondents were asked to report their personal ideal family sizes; mean ideal family size increased from 2.7 to 4.3 children for the same cohorts. Since age and marital duration were increased on an average by three years and two months in 1985 compared to those at the 1982 survey date, the mean ideal family size estimates shown in the last column of Table 3 are for age categories that approximate the 1982 categories. Among the younger women there is a clear preference for smaller families: over 40 per cent of the women aged less than 23 in 1985 nominated two children as the ideal. It should be noted that the 1985 SLCPS personal ideal measure was probably much more open to rationalisation (post facto version of family size preference) in terms of actual behaviour than was the generalised ideal measure from the 1982 SLCPS.

Most survey findings suggest that the average number of children desired increases noticeably with almost every increase in the number of living children[34,36,37]. Rationalisation undoubtedly affects responses to personal ideal questions, but it is not necessarily the sole determinant of those responses. It has to be allowed that there may be a genuine element of respondents with higher family size preferences simply behaving in accordance with those preferences [18,19]. However, the fact is that the correlation between desired family size and number of living children is often taken as evidence that desired size is adjusted upward with fertility.

TABLE 3

Mean ideal family size by age: 1982 SLCPS reinterviewed subsample and 1985 SLCS

Age (1982)	Ideal family size	Age (1985)	Ideal family size
15-19	2.7	18-22	2.7
20-24	2.6	23-27	2.9
25-29	2.8	28-32	3.1
30-34	2.9	33-37	3.4
35-39	3.0	38-42	3.7
40-44	3.0	43-47	3.9
45+	3.2	48+	4.3
Total	2.9		3.4
(N)	2183		2048

Source : Longitudinal data tape 1982-85.
Note : Ideal family size refers to all currently married women.

Fertility is greatly influenced by length of exposure to the risk of childbearing. Marital duration is therefore another demographic factor that is directly related to the number of living children women have if they do not fully implement fertility control. Women who have been married longer can be expected to have given birth to more children than women who have been married for shorter periods. If women do rationalise their family size preferences, the ideal number of children could be related to marital duration.

Table 4 using 1982 data shows that within ten years of marital duration, actual family size is lower than ideal family size. However, beyond ten years' marital duration, actual family size exceeds ideal. For recently married women the average number of children claimed to be ideal was about two and a half. On an average, SLCPS respondents at all marital durations had had exactly three living children while their mean ideal number of children remained slightly lower than that figure. The same women three years later (in 1985) reported a mean ideal family size of 3.4, which was identical to their mean number of living children. As with the 1982 data, women at shorter marriage durations in 1985 had higher ideal than actual family sizes. Even though both 1982 and 1985 data show a positive relation between marriage duration and ideal family size, larger ideal family sizes among women at longer marital duration, particularly in 1985, could in theory be a cohort effect rather than a reflection of rationalisation.

TABLE 4

Mean ideal family size and mean number of living children by marital duration, 1982 SLCPS re-interviewed subsample and 1985 SLCS

Marital duration (1982)	1982 SLCPS		Marital duration (1985)	1985 SLCS	
	Living	Ideal		Living	Ideal
0-4	1.1	2.6	3-7	2.0	2.8
5-9	2.3	2.8	8-12	2.8	3.1
10-14	3.3	2.9	13-17	3.4	3.5
15-19	3.8	3.0	18-22	4.0	3.7
20-24	4.8	3.1	23-27	4.9	4.3
25+	5.4	3.3	28+	5.4	4.7
Total	3.0	2.9	3.4	3.4	
(N)	2183	2183		2048	2048

Source: Longitudinal data tape 1982-85.

Both the personal ideal family size measure obtained in 1975 and 1985 and the generalised ideal family size measure obtained in 1982 indicate that few Sri Lankan women want to remain childless or have only one child; indeed no woman in 1982 nominated an ideal family size of zero. Among zero parity women in the 1975 SLFS, the 1982 SLCPS and the 1985 SLCS, less than two per cent nominated an ideal family size of fewer than two children. The majority, about 80 per cent and 60 per cent in 1982 and 1985 respectively, nominated two or three children as ideal, suggesting that large families also are not popular (Appendix Tables A and B).

Since the question on ideal family size in the 1982 SLCPS may not necessarily elicit personal family size desires, it is worthwhile to refine much of the following analysis by concentrating on young women or women with shorter marriage durations. As young women are better educated and more modern in outlook than older women, and therefore have a high possibility of having become users of family planning, their reproductive preferences may be assumed to have the greatest salience for them. Perhaps their 1982 'ideals' may reasonably be seen as personal preferences.

Women aged less than 25 years and women with less than five years of marriage duration in 1982 on average felt 2.6 children was the ideal family size, an estimate not greatly different from that for all women (2.9). Fairly close mean ideal family sizes of 2.9 and 2.8 children were found for the same two subgroups in 1985, although the overall mean of 3.4 children differs appreciably from both the subgroup estimates and the 1982 overall mean. However, when only those women who had borne no children between 1982 and 1985 were considered, an identical estimate of 2.7 was found for both subgroups in 1985, and this is almost equivalent to the estimates for the two subgroups in 1982.

The factors particularly affecting ideal family size other than demographic ones are socio-economic, cultural and political. A number of studies have shown that family size preferences change according to differences in socio-economic status [37-39]. A small family norm is also encouraged by a number of socio-economic factors, especially that broad but far-reaching concept of modernisation. The shift from familial to large-scale modes of production reduces the labour utility of children, and the advent of mass education further decreases their availability for work [40]. Women who are in the social class with the greatest exposure to modern ideas may express the smallest family size preferences.

Even though subsamples of women aged

less than 25 in 1982 and women aged less than 28 in 1985 show the same pattern of reproductive preferences, a comparison of mean ideal family sizes across categories of different socio-economic variables is complicated by the fact that ideals may be influenced by both the number of living children and the respondent's age. The composition by these variables may vary among categories. To overcome this problem, a multivariate analysis was undertaken.

Ideal family size: A multivariate analysis

Bivariate analysis of ideal family size shows that there is a positive relationship between actual and ideal family size, especially in the 1985 follow-up data. It is not known to what extent this is due to rationalisation and to what extent to women with higher genuine reproductive ideals having more children[24]. Probably elements of both are involved. The following analysis is planned, first, to examine the influence of actual family size on reproductive ideals, and second, to investigate differentials in ideal family size among different socio-economic groups in 1982 and 1985.

Without any control on age, ideal family size responses of each woman regressed on her actual family size, which is represented as a continuous variable, produced an R^2 of 0.101 for the 1982 survey. That is, only 10 per cent of the variation in the ideal family size measure in 1982 is accounted for by differences in actual family size. However, when ideal family sizes for the same women were examined using the more personal 1985 ideal family size measure, more than 37 per cent of the variance in ideal family size was accounted for by differences in actual family size. Some level of rationalisation exists, but undoubtedly the passage of more time would be expected to improve R^2 in 1985 as more women moved from parities below their ideal family sizes towards those ideals. Interestingly, in the 1975 SLFS the corresponding estimate was 56 per cent[34]; rationalisation was an inevitable problem. Pullum has shown that mean ideal family size was probably very low; admittedly, it was 3.75 when respondents were affected by the numbers already born and by the desire not to deny them, but only just over 2.5 when those married less than five years were questioned or when a synthetic-cohort approach was adopted in an effort to overcome the 'pollution' effect of fertility already achieved.

Before all socio-economic predictors were included in the six separate regressions (Table 5) where age control is introduced, each predictor, in the form of a set of binary variables, was first added along with actual family size. For each socio-economic predictor the new value of R^2 and the increment in R^2 were estimated. If in any one of the regression models the increment was statistically significant, the predictor was kept in all models. The socio-economic predictors were dummy coded and therefore categories for which no coefficient appears in Table 5 are reference categories, with effects expressed as deviations from these 'omitted' categories[41].

A comparison of regression coefficients for corresponding age groups in 1982 and 1985 shows similar patterns; although magnitudes are different, in general, deviations from omitted categories are in the same directions. This consistency indicates that, although the 1982 ideal family size measure is theoretically different from the 1985 measure, they show similar socio-economic differentials in family size preferences.

It was thought that asking about the best family size for some surrogate person such as in the 1982 survey could free the respondent from any feeling that she had to accommodate her answer to the number of children she already had[42]. But results reported here support Shah and Palmore's[28] and McClelland's[29] assumption: preferred family size for a surrogate she reports is likely to approximate her own

TABLE 5

Correlates of ideal family size: Comparison of regression coefficients of ideal family size on demographic and socio-economic predictors, 1982 SLCPS re-interviewed subsample and 1985 follow-up sample

Variable	SLCPS (1982)			SLCS (1985)		
	15-24	25-34	35+	18-27	28-37	38+
Education						
No schooling	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
Primary	-.103 ns	-.078 ns	-.221 c	-.203 ns	-.149 ns	-.262 d
Secondary	-.203 ns	-.233 c	-.229 d	-.122 ns	-.248 c	-.453 b
Higher	-.317 d	-.406 b	-.376 c	-.354 c	-.428 b	-.544 b
Ethnicity/Religion						
Sinhalese/Buddhist	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
Tamil/Hindu	-.115 ns	-.217 ns	-.267 ns	-.128 ns	-.091 ns	-.433 ns
Moor/Muslim	.324 d	.359 c	.621 c	.188 ns	.359 c	.358 ns
Christian	-.187 ns	-.0.65 ns	.004 ns	-.100ns	-.239 d	-.322 d
Residence						
Urban	-.300 b	-.209 b	-.265 b	-.289 b	-.012 ns	-.115 ns
Rural	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
Estate	-.099 ns	-.249 ns	-.600 c	-.082 ns	-.272 ns	-.1.358 a
Contraceptive use						
Non-user	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
User(non-sterilised)	-.156 d	-.214 a	-.222 c	-.282 c	-.136 ns	-.114 ns
User(sterilised)	-.456 c	-.235 b	-.169 d	-.080 ns	-.203 c	-.241 c
Work status						
Not working	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
Working at home	.347 c	.097 ns	-.039 ns	.212 ns	.063 ns	-.315 ns
Working away	.211 ns	.134 d	.206 c	.173 ns	.145 ns	.203 d
Husband's Occupation						
Primary sector	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
Not in primary	-.180 d	-.093 ns	-.183 c	-.159 d	-.146 d	-.295 b
Constant	2.663 a	2.909 a	3.145 a	2.505 a	2.494 a	2.863 a
R^2	.147	.189	.155	.325	.343	.411

Source : Longitudinal data tape 1982-85.

Note : a : $p < 0.001$, b : $p < 0.01$, c : $p < 0.05$, d : $p < 0.10$, ns not significant. In each regression the effect of number of living children is included.

preference. Clearly those respondents who reported higher generalised ideal family sizes in 1982 also reported a higher personal ideal in 1985 while those who reported small family sizes in the first survey also did so in the second survey.

Among socio-economic factors, supporting the assumption that better educated women tend to prefer smaller families[43-45], the educational level of the respondent exhibits the expected inverse relationship quite strongly; at all ages more educated women preferred smaller families. The combined ethnicity/religion variable also shows the expected pattern, with the Moor/Muslim group having the largest ideal family size irrespective of age. Although ideal family size differences narrow with decreasing age, older Muslim women (35+) in 1982 recorded an effect .89 greater than Tamil/Hindu women, with a similar differential exhibited in 1985. This clearly indicates that after controlling actual family size and other socio-economic factors, Moor/Muslim women still have higher ideal family sizes than other ethnoreligious groups in Sri Lanka (Appendix Tables A and B; Table 5). Muslim women in Sri Lanka are largely traditional in outlook and more often support pronatalist ideals than other women. Although the effects are not strong enough to be statistically significant, generally Tamil/Hindus and Christians recorded lower ideal family sizes than Sinhalese/ Buddhists.

In Sri Lanka, as in most other developing countries, urban women generally had lower family size ideals when compared with rural women as the reference group. This may be partly a result of modernising forces such as Western ideas and a cash economy. Older estate women had significantly lower family size ideals than rural women but at younger ages there was no significant difference (estate residents are predominantly Indian Tamils). These older estate women's fertility was a serious burden for their economic life, therefore presumably they were determined to have very few children throughout their lives. That motivation seems to have been linked not only with personal reproductive preferences but also with generalised ideals. Many researchers, using 1975 SLFS data, have found that estate sector fertility was lower than urban or rural fertility[46-48]. Langford's[48] assumption that induced abortions were the most likely explanation for low marital fertility in the tea estates could largely involve these older women. On the other hand, young tea estate women in the 1982 and 1985 surveys had benefitted from new facilities on the estates such as maternity leave with pay, and from improvement in their economic circumstances and nutrition which may have influenced their reproductive ideals positively. Not only their reproductive preferences but also their fertility was moving upward: at the 1987 SLDHS, the total fertility rate (TFR) of 3.4 for the tea estates for the period 1982-87 was the highest, while the urban TFR of 2.2 was the lowest and the rural rate of 2.9 was intermediate[49].

Research shows that a major factor affecting declines in fertility preferences in the developed world has been the increased participation of women in the labour force[50]. However, among work status categories in Sri Lanka, except for women in the oldest age group in 1985, those who were not working had smaller family size ideals than women working either at home or away from home. Since most female workers in Sri Lanka are engaged in the agricultural sector and participate in work without long-distance daily commuting they probably prefer larger family sizes in order to have enough child labour to support their activities. Women whose husbands were in the non-primary sector also showed smaller ideal family sizes than women whose husbands were in the primary sector. Contraception was clearly related to family size ideals; those who were using no method recorded the highest ideals in all age groups considered in both 1982 and 1985.

Perhaps the principal importance of comparing ideal family size reports in 1982 and 1985 is to identify which socio-economic categories of women tend to prefer larger family sizes than others. A largely similar pattern of socio-economic differentials in family size ideals was observed from 1982 to 1985. The overall conclusion is that, although the questions on ideal family size adopted in the two surveys were different, the reproductive ideals show the same pattern of consistency and approximate each other.

The evidence on test-retest reliability of the ideal number of children in other developing countries is found to be weak; for instance, only 54 per cent of respondents gave the same number of children to the identical question, "If you could choose exactly the number of children to have in your whole life, how many children would that be?" in the World Fertility Survey of Indonesia and its reliability study[51]. However, when Sri Lankan individual data was used to examine the exact correspondence between family size preferences (two questions were not identical), about 43 per cenf of the respondents gave identical ideal family sizes in the longitudinal sample (Table 6).

shows a decline from 3.7 children in 1975 to 3.4 children in 1985. The mean of 2.9 children obtained in 1982 was lower than either of these figures, but this was a result of the nature of the question used in that survey; it was somewhat hypothetical for older women.

Women preferred rather small families, although very few wish to remain childless or to have any one child. The overwhelming majority nominate two or three children as ideal, and few want larger families. Ideal family size estimates from the 1982-85 longitudinal data show a similar pattern of socio-economic differentials. Respondents who reported higher generalised ideal family sizes in 1982 also reported a higher personal ideal in 1985 while those who reported small family sizes in the first survey also did in the second survey.

TABLE 6

Level of comparison (percentage) in reported personal vs. generalised ideal family size

Ideal family size, 1982	Ideal family size, 1985						(N)
	1	2	3	4	5+	Total	
1	22.7	36.4	27.3	9.1	4.5	100.0	22
2	1.2	41.0	32.2	16.6	9.0	100.0	813
3	0.7	12.4	50.6	20.3	15.9	100.0	796
4	0.3	5.5	21.7	44.0	28.5	100.0	305
5+	0.0	8.0	14.3	18.8	58.9	100.0	112

Source: Longitudinal data tape 1982-85.

There is little remaining debate in Sri Lanka about the undesirability of unlimited fertility; family size preferences are already at low levels. Mean (personal) ideal family sizes of 3.4 and 3.1 were recorded in 1985 and 1987, while the 1982 SLCPS generalised mean was 2.9 children; the estimates were not much different from each other. Even this may not hold in some other developing countries, family size preferences sought via personal and generalised types of questions of Sri Lanka showed little difference.

Summary

Using cross-sectional as well as longitudinal data this paper explores the generalised and personal family size preferences of Sri Lankan women. Mean ideal family size

The results support Shah and Palmore's[28] and McClelland's [29] assumption: preferred family size for a surrogate in Sri Lanka tends to approximate the respondent's own preferences. In fact about 43 per cent of the respondents gave identical family size preference—for themselves and for a surrogate—in the longitudinal sample.

APPENDIX TABLE A

Percentage distribution of currently married women by ideal number of children and mean ideal family size for selected socio-economic groups, 1982 SLCPS re-interviewed subsample

Variable as of 1982	Ideal number of children				Mean ideal family size		
	1	2	3	4+	All women (N)	Women married 0-4 years	Women aged 15-24
Education							
No schooling	.7	27.0	35.6	36.7	3.3 (267)	2.9	2.9
Primary	.5	31.6	42.7	25.1	3.0 (730)	2.8	2.8
Secondary	1.5	42.5	38.3	17.7	2.8 (804)	2.6	2.5
Higher	1.4	54.1	33.5	11.1	2.6 (370)	2.5	2.5
Ethnicity/Religion							
Sinhalese/Buddhist	1.2	38.0	38.6	22.2	2.9 (1810)	2.7	2.6
Tamil/Hindu	.6	46.9	39.5	13.0	2.7 (162)	2.6	2.7
Moor/Muslim	-	25.8	37.9	36.4	3.2 (66)	3.1	3.0
Christian	-	48.1	39.1	12.8	2.7 (133)	2.6	2.2
Residence							
Urban	2.0	55.0	32.3	10.7	2.5 (440)	2.3	2.2
Rural	.9	33.7	40.0	25.4	3.0 (1549)	2.8	2.8
Estate	-	44.5	42.3	13.2	2.7 (182)	2.6	2.7
Contraceptive use							
Non-user	.9	38.3	36.7	24.1	2.9 (852)	2.8	2.8
User (non-sterilised)	1.5	44.0	38.1	16.4	2.7 (822)	2.6	2.5
User (sterilised)	.6	31.6	2.642.9	24.9	3.0	(497)	2.8
Work status							
Not working	1.0	41.2	38.6	19.2	2.8 (1433)	2.6	2.5
Working at home	.4	31.0	37.1	31.5	3.1 (246)	2.7	3.1
Working away	1.6	36.1	39.6	22.7	2.9 (490)	2.8	2.9
Husband's occupation							
Primary sector	.6	30.8	39.7	28.9	3.1 (827)	2.8	2.9
Not in primary	1.3	43.9	38.0	16.7	2.7 (1344)	2.6	2.5
Sri Lanka	1.1	38.9	38.6	21.4	2.9 (2171)	2.6	2.6

Source : Longitudinal data tape 1982-85.

Notes : Education up to Grade 5 equates to primary, Grades 6 to 9 to secondary, Grades 10+ to higher. Husband's occupation was not reported by 48 respondents; however, it is assumed that they were in the primary sector. Since in Sri Lanka ethnicity and religion are almost synonymous they are combined and treated as a composite variable.

APPENDIX TABLE B

Percentage distribution of currently married women by ideal number of children and mean ideal family size for selected socio-economic groups,- 1985 SLCS

Variable as of 1985	Ideal number of children						Mean ideal family size		
	1	2	3	4	5	6+	All women (N)	Women married 3-7 years	Women aged 18-27
Education									
No schooling	1.9	14.7	22.7	22.7	22.3	15.6	4.2 (211)	3.3	3.4
Primary	.6	17.9	36.4	23.3	11.8	10.0	3.7 (692)	2.8	2.9
Secondary	.5	23.9	38.8	23.3	9.4	4.0	3.3 (794)	2.7	2.9
Higher	2.8	33.9	41.3	16.5	3.4	2.0	2.9 (351)	2.7	2.6
Ethnicity/Religion									
Sinhalese/Buddhist	1.1	22.3	35.6	22.5	11.1	7.4	3.5 (1697)	2.8	2.9
Tamil/Hindu	1.3	23.9	46.5	15.5	7.7	5.2	3.2 (155)	2.8	2.9
Moor/Muslim	-	15.8	33.3	28.1	12.3	10.5	3.8 (57)	3.2	3.0
Christian	0.8	29.7	42.2	19.5	6.3	1.6	3.1 (128)	2.6	2.7
Residence									
Urban	.9	31.8	38.1	19.3	7.2	2.8	3.1 (431)	2.7	2.5
Rural	1.1	19.7	35.2	23.6	11.9	8.5	3.6 (1445)	2.8	3.0
Estate	1.2	24.4	47.1	16.3	7.6	3.5	3.1 (172)	2.9	3.0
Contraceptive use									
Non-user	1.5	25.6	35.8	21.0	9.2	6.8	3.4 (586)	3.0	3.0
User(non-sterilised)	.3	13.8	38.6	23.6	13.5	10.3	3.8 (720)	2.8	2.9
User (sterilised)	1.5	29.0	35.7	21.4	8.8	3.6	3.2 (742)	2.6	2.8
Work status									
Not working	1.0	22.7	36.7	22.6	10.5	6.6	3.4 (1536)	2.8	2.8
Working at home	1.8	20.0	40.0	25.5	9.1	3.6	3.3 (55)	3.1	3.3
Working away	1.3	23.0	36.5	19.9	10.9	8.3	3.5 (457)	2.9	3.0
Husband's occupation									
Primary sector	.6	17.6	32.6	23.6	12.9	12.7	3.8 (653)	2.9	3.1
Not in primary	1.3	25.0	38.7	21.4	9.5	4.2	3.3 (1395)	2.7	2.8
Sri Lanka	1.1	22.7	36.8	22.1	10.5	6.9	3.4 (2048)	2.8	2.9

Source : Longitudinal data tape 1982-85.

Notes : Education up to Grade 5 equates to primary, Grades 6 to 9 to secondary, Grades 10+ to higher. Distribution of women by work status categories in 1985 survey was found to be somewhat different from that in 1982; in 1985 a relatively smaller proportion of women were found to be working at home while the non-working group had increased. It is not known whether this is related to increasing trends in unemployment or deliberate misreporting.

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A comparative study of the accessibility of health and family welfare services among slum dwellers

Dr. C.V.S. Prasad and Dr. U.V. Somayajulu

Introduction

The urban population has been increasing rapidly due to large-scale migration from undeveloped and less developed rural areas to developed urban areas and industrialised cities. India's urban population has increased from 17.3 per cent of the total population in 1951 to 25.7 per cent in 1991 and is expected to reach 45 per cent by 2000[1]. This rapid increase, particularly in the big cities, has adversely affected the living conditions of the people. Here, it is the poor who generally live in slums, who suffer from a lack of basic amenities and health services. Though urban areas are better equipped in terms of health infrastructure as compared to rural areas, primary health care services appear to be quite inaccessible to the poorer sections of the population particularly slum dwellers as shown by studies carried out in the slums of Patna[2] and in Dharavi, Bombay, the largest slum in Asia[3].

Greater accessibility to private as against government health facilities has been reported in the slums of Bombay, Rajkot, Kanpur, Indore, Bhavani Patna and Kumbakonam[4]. Studies carried out by the Operations Research Group (ORG)[5] for UNICEF also reveal a greater utilisation of private facilities. However, none of the studies provide a comparative picture of the extent of availability and utilisation of health and family welfare services across cities of varying population size. Keeping this in view, an attempt was made to study the issue.

The present paper is based on data collected for such a study carried out by ORG for USAID in Calcutta, Indore and Bharuch, representing different population sizes. The study was carried out in four parts, namely a review of the literature, analysis of secondary data, analysis of hospital and community data, and a household survey in selected slums. The present paper discusses the findings of the community and household survey data.

Analysis of the community data

Information regarding the availability and

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utilisation of basic services (including health and family welfare services) were obtained by canvassing a community schedule in 109 slums—30 in Calcutta; 20 in Indore; 15 each in Bharuch, Bombay and Patna, and 14 in Bhubaneswar. Private health facilities were found to be more accessible to the slum dwellers irrespective of the city. The analysis of community data further revealed that the slum dwellers preferred government sources for treatment of acute, chronic health problems as well as for maternal and child health (MCH) and family planning services. On the other hand, a preference for private sources was observed in case of minor ailments. The analysis of hospital data also supported this observation.

Analysis of household survey data

To get an idea of the actual utilisation of available health and family welfare services, as well as the incidence of sickness and health care expenditure, a two-stage stratified random sample survey was carried out in the three cities covering 900 households (450 in Calcutta, 300 in Indore and 150 in Bharuch) spread over 65 slums. The findings of this household survey are presented in the following paragraphs.

Accessibility of the nearest health centre

Table 1 presents the accessibility of health service facilities measured in terms of distance between the respondent's residence and the nearest health centre. It is evident from the table that the nearest private hospital was relatively closer than the nearest government hospital in all the three cities, with Calcutta being relatively less distant as compared to the other two cities.

Incidence of sickness and service facility visited

Calcutta had the highest overall incidence of sickness where at least one member in 70 percent of the households had fallen sick during the three months prior to the date of survey as against 49 per cent in Bharuch and 33 per cent in Indore. The total number of episodes varied from 102 in Bharuch to 427 in Calcutta with the corresponding figure for Indore being 123. The mean number of episodes per patient was 1.02, 1.03 and 1.11 in Calcutta, Indore and Bharuch respectively.

Table 2 indicates the service facility from where treatment was obtained during sickness. By and large, the slum dwellers in Calcutta and Indore preferred private sources, whereas in Bharuch they were more or less evenly distributed in their preference for private and government sources. Further probing revealed that private sources were utilised mainly because they provided better treatment and because of their proximity; free treatment led to

TABLE 1
Distance to nearest hospital

Distance in km	Calcutta				Indore				Bharuch			
	Govt.		Pvt./Trust		Govt.		Pvt./Trust		Govt.		Pvt./Trust	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Within slum	4	5	45	12	–	–	7	3	2	4	23	22
Within 1 km.	63	82	307	83	20	30	135	58	25	54	72	69
1-2	6	8	9	2	25	37	59	26	10	22	6	6
2-3	2	3	7	2	14	21	21	9	4	9	1	1
3+	2	2	4	1	8	12	9	4	5	11	2	2
Total	77	100	372	100	67	100	231	100	46	100	104	100

greater utilisation of government sources in all the three cities.

TABLE 2
Percent distribution by medical facility utilised during sickness

Source	Calcutta	Indore	Bharuch
Home treatment	1	2	4
Government	25	27	43
Private/Trust	73	68	51
Other	1	3	7
Total	100	100	100
No. of episodes	427	123	102

Table 3—Panel A, gives the distance of the medical facility from which treatment was actually obtained during sickness. Private sources of treatment were relatively nearer in all the three cities. In Calcutta however, even government facilities were relatively closer as compared to the other two cities.

The amount spent on doctor's fees, medicine and transport was obtained for each episode from all members of the households surveyed who had suffered an illness during the three months prior to the date of survey. The combined expenditure incurred per episode ranged from Rs. 52 in Indore to Rs. 74 in Calcutta, with Bharuch between them (Rs. 70). Health care expenditure was found to be significantly higher (at five per cent level of significance) in Calcutta and Bharuch than in Indore.

The monthly expenditure on various items such as food, fuel, house rent, electricity, education of children, health etc. were ascertained to work out the percentage share of health care expenditure to total family expenditure. This proportion ranged between three per cent in Bharuch to seven per cent in Calcutta with Indore at four per cent. The lower rate particularly in the latter cities could be due to a greater dependence on Government services by a reasonable proportion of the population, non-reporting of incidents of sickness during the three months preceding the survey by a good proportion of households, and dependence on home treatment.

TABLE 3
Percentage distribution by distance to medical and family planning facilities utilised, by type of facility

Distance in km.	Calcutta		Indore		Bharuch	
	Govt.	Pvt./ Trust	Govt.	Pvt./ Trust	Govt.	Pvt./ Trust
A. Medical facility						
Within slum	5	19	–	4	5	23
Within 1 km.	61	25	19	47	39	43
1-2	11	3	19	30	18	14
2-3	15	1	22	12	14	10
3+	8	2	40	7	24	10
Total	100	100	100	100	100	100
(N)	107	307	32	80	44	51
B. FP facility						
Within slum	8	7	1	–	4	40
Within 1 km.	56	39	13	24	37	20
1-2	9	24	14	35	27	20
2-3	13	12	22	29	11	20
3+	14	18	50	12	21	–
Total	100	100	100	100	100	100
(N)	213	33	119	17	81	5

Awareness of family planning methods

Tubectomy emerged as the most popular method of family planning among the slum dwellers irrespective of the place of residence. Knowledge of all the family planning methods was higher among the slum dwellers in Calcutta than among their counterparts in Indore and Bharuch. Awareness of spacing methods was also considerably higher in Calcutta than in the other two places (Table 4).

Current use of family planning and source used

Family planning adoption was higher

TABLE 4
Percentage distribution by knowledge of family planning methods

Method	Calcutta	Indore	Bharuch
Vasectomy	91	89	76
Tubectomy	98	96	91
IUD	94	46	51
Condom	97	54	61
Pill	96	51	56
MTP	82	34	41
Total	100	100	100
(N)	450	300	150

among couples living in the slums of Bharuch (59 per cent) and Calcutta (56 per cent) than in Indore (47 per cent). A method wise analysis revealed a preference for sterilisation in all the three cities, particularly the female method (32 per cent in Calcutta to 45 per cent in Bharuch). The use of modern temporary methods was much higher in the Calcutta slums (22 per cent) while it was exceptionally low in Bharuch (4 per cent) and Indore (3 per cent).

The findings also indicate a greater utilisation of government facilities for obtaining family planning services in all the three cities (84 per cent in Calcutta to 92 per cent in Bharuch). Only six per cent (in Bharuch) to 13 per cent (in Calcutta) of current users utilised private sources for meeting their family planning needs. In Calcutta, government facilities were reported to be much nearer to the slums than private ones. In Indore and Bharuch, however, government sources, though relatively distantly located (Table 3; Panel B), were by and large preferred for family planning.

Conclusions

The study based on community as well as household data thus provides a clearer and comparative picture about the accessibility and utilisation of health and family welfare services in Calcutta, Indore and Bharuch. In these cities, private health service facilities were found to be relatively close to the slums. The slum dwellers preferred government sources though located more distantly than private ones, for the treatment of acute, chronic health problems, MCH and family planning services while private sources were preferred in case of minor ailments. Their socio-economic background and the type of need or purpose apparently guided the people while making a choice between a private and a government health facility, and physical distance seems to have been relegated to a back position, with the availability of better transport facilities.

It is interesting that the findings of the community and household survey data were consistent with these results, indicating that community surveys can perhaps be utilised for such studies, as they seem to provide a more efficient approach for assessing accessibility-related issues in terms of time, cost and quality; household surveys involve more time and cost, and secondary sources are scanty and obscure.

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The impact of maternal education on the health of the child

Mr. Braja Mohan Otta

Introduction

The Alma Ata Declaration of 1978 to provide 'Health for All' by 2000 A.D., has led to worldwide efforts to improve health conditions, particularly those of mothers and children. In India, among other goals, the government has set itself the goal of bringing down the infant mortality rate from 120 per 1000 live births in 1988 to 60 by the turn of the century.

The relationship between infant/child mortality and various socioeconomic characteristics has been studied by various workers. Summarising the principal findings of the World Fertility Survey (WFS) data in Colombia, Baldion observes that, "The most important determinant of the level of infant and child mortality is the socioeconomic status of the family (measured by level of education of the wife). The difference in mortality between the lowest and highest levels of socioeconomic status is considerable even after controlling for other factors[1]. Analysing WFS data for Panama, Guerra[2] concludes that the most significant social differentials of infant mortality are the mother's educational level and the father's occupation: among mothers with less than six years of schooling the infant mortality rate was 66 per 1000 live births, while for those with more than six years of schooling it was 37. Caldwell and Caldwell[3] cite Gaisie's analysis of 1960 census data which demonstrates that Ghanaian mothers of similar education, whether urban or rural, experienced similar levels of child mortality, and another by Bhem wherein census data from eight Latin American countries showed an inverse relationship between mother's education and child mortality.

According to Caldwell and Caldwell[3], "Education brings with it a new culture—westernisation or modernisation .... The educated are not expected to behave like their sisters. Mothers-in-law concede more readily to educated daughters-in-law the right to make decisions about child care and to adopt the treatments they believe in. Husbands are also more likely to listen to educated wives ....". Confirming the role of education in modernising the learner as reported by Caldwell, Kritz and Gurak[4] conclude that education allows for a wider social network; new reference groups and greater exposure to the modern world.

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Moreover, the modernising effects may be greater for girls than for boys, as exposure to schooling allows them to be free from parental control for several hours a day and gives them the experience of interacting with boys, strangers and authority figures other than their parents. Such experiences give them the skill to ask questions and explain ideas. Sathar and Mason[5] hypothesise that education improves women's autonomy in terms of their being controlled by their husbands and mothers-in-law, and also gives them improved knowledge and access to the means of fertility limitation.

Caldwell[6] has summed up the three interlocking processes by which education acts in reducing infant mortality: (1) reduction of fatalism on the face of the child's ill health; (2) a greater capacity for manipulating the world i.e. knowing where the facilities are and securing the attention of doctors and nurses; and (3) a change in the traditional balance of family relationship that shifts the focus of power away from the mother-in-law and ensures greater control over family resources.

Social science research involves the study of either a very large population or a small population over a length of time in order to get an appreciable number of cases for making a valid generalisation (since death, the dependent variable, is a rare event). An alternative approach therefore would be to study growth faltering or what is called weight for age. There is now ample evidence to suggest that growth faltering may be more appropriately considered as a nonspecific indicator of health. Data from India, Bangladesh, and New Guinea suggest that there is a consistent increase of death risk with low weight for age[7]. Infants with low weight for age have greater chances of contracting infection and this, in turn, may lead to lower weight for age. Both infection and low weight for age either independently or in combination may lead to mortality.

Objectives

Although there is complete agreement among social scientists about the inverse relationship between maternal education and infant mortality, the mechanisms of the relationship have not been empirically established. Further, one is not sure if a similar negative relationship holds good in the case of ill health of the child. The present study is an attempt to find out if there is an inverse relationship between maternal education and ill health of the child, and to empirically establish the mechanisms thereof.

Following Caldwell's argument, it is assumed that—

1. education of the mother tends to reduce fatalism particularly in matters relating to child health,
2. education improves the mother's knowledge regarding health care and helps her take better health measures, and
3. the level of education confers greater autonomy in the family to the mother in matters relating to child health.

Sample & Methodology

Data for the present study was collected from the sub-divisional town of Kendrapara in Orissa. Kendrapara is about 65 k.m. away from Cuttack, the district headquarters, and about 35 km. from Paradeep, the port town situated on the eastern coast of India. The choice was appropriate in that the town with its rural background provides a good mix of modernity and tradition. The total population of Kendrapara at the time of data collection (November-December 1989) was 31,770 living in 4,962 households. Health and educational facilities were adequate. There was a government hospital with indoor facilities for 100 adults and 50 children, in addition to some ten private doctors. The town also had five high schools, a number of primary schools, a teachers' training school, a school of nursing, and five colleges, three of which offered general undergraduate courses, and one each offered courses in Law and Education.

Kendrapara, for the convenience of health adminstration is divided into 16 zones. Four zones were selected at random and all mothers who had at least one living child below five years of age were included in the study sample. If a mother had more than one living child under five, the youngest was considered for the purpose of the study. The total number of mothers thus selected was 503, with an average age of 28.33 years. Of these, 81.7 per cent were Hindu and the remaining (18.3 per cent) were Muslim. The majority (92.7 per cent) were housewives, with an average annual family income of Rs. 19,096.

Data collected from the mothers with the help of an interview schedule prepared for the purpose concerned their educational level, fatalistic attitude, knowledge and practice of health care measures, and power position within the family. Education was graded into six categories—from illiterate to postgraduate with scores from 1 to 6: an illiterate got a score of 1 while one who was a postgraduate got a score of 6. Fatalistic attitudes in matters of health related to beliefs that children are "gifts of god', that disease is inflicted and cured by a force outside the control of man, that man is born with a predetermined fate and his life span is fixed prior to his birth, or that (among Hindus) his present suffering is a result of the bad actions of his previous birth. Practices stemming from such fatalistic beliefs involve offering worship during an illness, consulting astrologers, or wearing a particular gem, bead or talisman, or resorting to faith healing or witchcraft.

The interview schedule contained 25 items relating to fatalistic attitudes and practices. A respondent who was positively oriented towards fatalism was assigned a score of +1 while a score of -1 was assigned to a respondent who was non-fatalistic. The sum of the scores of all the items formed the total fatalistic score of the respondent which could range between +25 and −25.

Fifteen items in the interview schedule related to knowledge and practice of correct health care measures, including those on pre and postnatal care. Correct knowledge was assigned a score of +1 and its absence, a score of -1. The sum of the individual scores formed the total health care knowledge score. The health care practice score was calculated in a similar manner. Both the knowledge and practice scores for a single respondent could range between +15 and -15.

The mother's power position within the family was assessed by the extent of autonomy she enjoyed in taking decisions concerning the family particularly in the event of the child's illness. Scores were assigned and the sum of individual scores formed the total power score of the respondent.

Growth faltering or weight for age, utilised as an indicator of child health, was calculated by comparing the actual weight +for-age of the child with the standard weight chart. Standard weight charts are formulated by weighing a very large number of children of both sexes and of varying ages, and preparing a table showing their distribution by age, sex and weight. The median or 50th percentile of this weight is taken to be the standard. The actual weight of the child under study (taken at the time of data collection) is then expressed as a percentage of the standard weight. According to the classification of the Indian Academy of Paediatrics[8], child health is divided into four grades: 80 per cent or more of the standard weight denotes good health; between 80 to 71 per cent of the standard weight indicates first degree ill health, 70 to 61 per cent indicates second degree ill health, and 60 to 51 per cent of the standard weight denotes third degree ill health.

Results and Discussion

The relationship between the mother's

educational level and the health status of the child is presented in Table 1.

TABLE 1
Distribution of mothers by educational level and health status of their child

Health status of the child	Educational level of the mother					
	Uneducated	Primary	Secondary	Intermediate	Graduate & above	Total
Good	26	48	50	32	37	193 (38.4)
1st degree ill health	31	35	4	25	17	153 (30.4)
2nd degree ill health	25	22	35	12	6	100 (19.9)
3rd degree ill health	15	12	20	9	1	57 (11.3)
Total	97 (23.3)	117 (29.8)	150 (15.5)	78 (12.1)	61 (100.0)	503 (19.3)

As indicated in Table 1, less than a third of the mothers (150) had received secondary level education and over a quarter (69) had either completed their intermediate examination or were graduates or post-graduates. And, while 23.3 per cent (117), the majority, had read upto the primary level, almost a fifth (97) had not had any formal schooling. Compared to the child's actual weight with the standard weight chart, almost two-fifths (38.8 per cent) of the children were observed to be in good health, 30.4 per cent (153) were in first degree ill health, and a fifth (100) and just over a tenth (57) were in second and third degree ill health respectively. The tabulated value of chi square at a 5 per cent level of significance for 12 degrees of freedom was 21.026 whereas the calculated value was 26.73. Thus the null hypothesis that: "The health condition of the child is independent of the mother's educational level" was rejected and maternal education was found to be related to the health status of the child.

The results presented in Table 2 show that the child's health corresponds with the maternal education score, and as it deteriorates there is a corresponding fall in the educational score.

As is evident from Table 2, maternal education is inversely related to fatalism. As the education score fall, the fatalism score

TABLE 2
Average scores indicating the relationship between the child's health, and maternal education, fatalism, health care knowledge, practices and autonomy

Health of the child	Average score				
	Mother's education	Mother's fatalism	Mother's health care knowledge	Mother's health care practice	Mother's power in family
Good health	3.93	4.49	2.22	0.74	0.65
1st degree ill health	3.54	4.83	1.96	0.02	0.62
2nd degree ill health	3.24	5.26	1.14	−1.89	0.39
3rd degree ill health	3.13	5.07	−0.46	−4.65	0.17

tends to increase indicating thereby that educated mothers are less fatalistic than their uneducated counterparts. The coefficient of correlation between education and fatalism was ()) 0.93.

A higher maternal educational level was also related to higher knowledge and use of better health measures and a high power position within the family. So also, mothers with low education were found to have less knowledge about health care, did not take proper health measures and enjoyed less autonomy within the family. The coefficients of correlation of maternal education with health care knowledge and practice and power position were found to be 0.85, 0.89 and 0.88 respectively. Four tests of significance were conducted against the null hypothesis that—(1) the mother's educational level is independent of her fatalistic attitude in matters of her child's health, (2) maternal education and knowledge about health care are not related to one another, (3) the mother's educational level and actual health care practice towards her child are independent of each other, and (4) the mother's educational level is independent of the power she enjoys within the family. The calculated values of 't' at a 5 per cent level of significance for six degrees of freedom were 6.04, 3.55, 4.63 and 14.29 respectively, and the tabulated value was 2.45, thus rejecting all four null hypothesis, and clearly indicating that maternal education tends to reduce fatalism, improves the mother's knowledge regarding health care and helps her to take better health measures. It also gives her greater autonomy within the family.

At this juncture, it will be of interest to take a closer look at the role of education vis-a-vis income on the health status of the child. Educated women are likely to marry men of yet higher education as hypergamy is generally preferred in mate selection in India. Higher education invariably leads to higher income. Further, education of the mother may increase her own chances of employment, thereby raising the family income further. It is possible therefore that higher education acts as a sort of proxy for higher income.

Table 3 shows the relation between average family income, maternal education and health status of the child.

TABLE 3

Relationship between the health of the child, and average maternal education scores, and family income

Health of the child	Average education score of the mother	Average family income in Rs.
Good	3.93	21,029
1st degree ill health	3.54	18,910
2nd degree ill health	3.24	17,010
3rd degree ill health	3.13	16,459

Good health of the child is not only associated with higher education but also with higher income. Therefore, one cannot be sure as to whether education is independent of income in affecting the health of the child. The impact of mother's education vis-a-vis infant mortality has been studied by several workers[11]. All these studies have shown the importance of maternal education over income.

The mothers in the present study were divided into four income groups based on approximate median and quartile points. The average health scores of the children were calculated by assigning weights. A child with third degree ill health was assigned a weight of 1, with second degree ill health of 2, first degree ill health of 3, and a child in good health was assigned a weight of 4. The average health score of children of mothers of different educational and income levels is presented in Table 4.

A close study of the data reveals that the health status of the child tends to rise with

TABLE 4
Average health scores of children by maternal education and family income

Mother's educational level	Health score for family income			
	Very high	High	Low	Very low
Illiterate	3.75	2.86	2.90	2.58
Primary	2.70	2.55	3.23	3.12
Secondary	2.97	2.75	2.77	2.81
Higher Secondary	3.13	3.10	3.13	2.00
Graduate	3.53	3.09	3.60	2.00
Post-graduate	3.77	3.67	3.67	—

an increase in the level of education of the mother in all income groups except the 'very low'. This suggests that maternal education plays a positive role in determining the health status of the child only when there is a certain minimum level of family income, below which the relationship does not exist. This is expected, because unless there is a certain minimum income level, proper health care measures cannot be taken.

Conclusion

Studies on infant mortality have established an inverse relationship between the level of maternal education and rate of infant mortality. The present study attempted to verify if the relationship between maternal education and infant mortality and the mechanisms involved therein also holds good in explaining the health status of the child. While the data from the present study proves, beyond doubt, the above contention, it also indicates that such a relationship is possible provided there is a certain minimum level of family income.

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Perceptions about Nirodh among users and peripheral health workers: A psycho-social study

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Introduction

The condom was the first barrier method to be introduced in the Indian family planning programme in the late 1950s. Advocated as a temporary method recommended specially for younger age groups for birth spacing, condoms were initially imported from Western countries. Since the late 1970s, however, large-scale manufacture has been undertaken within the country, and at present, condoms are distributed both free of cost and commercially at a subsidised nominal cost. Nevertheless, compared to developed countries the use and uptake of "Nirodh" (the brand name for the condom offered by the government programme) has remained far from satisfactory. For example, in 1972, Sweden with a population of eight million people reported the use of 55 million condoms in addition to other methods of contraception, whereas in India, even in 1981-82, the number of users was estimated at 4.4 million.

A few studies conducted earlier have shown that Nirodh use is higher in urban than in rural areas. Bhardwaj and Mullick[1] report that 17 per cent of Nirodh users in urban Delhi were irregular users mainly because of irritation during sexual intercourse, non-availability at the time of need and lack of satisfaction, while 54 per cent of their spouses did not like the method as it "affects sexual pleasure" and 23 per cent reported method failure. Rao[2] has summarised 13 studies on conventional contraceptive use which indicate that urbanites are more familiar with the device and it seems to be more effectively used by the upper and well-educated classes. Another study[3] reports that over a tenth of rural and a third of urban respondents in Rajasthan experienced a rupture of Nirodh during intercourse, while another conducted by the Operations Research Group[4] in Andhra Pradesh found that two-fifths of the respondents who were against the use of Nirodh, disliked it because of decreased sexual satisfaction, one-fifth reported method failure, and a tenth rejected it because it was "troublesome" to use.

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Objectives

The low use of Nirodh in India inspite of the government's efforts to provide it free or at a very nominal cost, raises doubts as to whether the people are really aware of its simplicity of use, effectiveness and availability. At the same time, there is a paucity of information on the experiences of couples who have used the method. Most earlier studies have utilised small samples or are part of a larger evaluation of the family planning programme. An in-depth psycho-social study of Nirodh users has not been carried out in the recent past and hence it was considered necessary to undertake a large-scale psycho-social study on the use of Nirodh and the perceptions and experiences of users. The objectives of the present study therefore were to (1) identify Nirodh users in two diverse settings, urban and rural, of a district; (2) estimate and cross-check the rate of effective use of Nirodh with official records; (3) study the perceptions of peripheral family planning workers about the Nirodh programme; and (4) study the perceptions and experiences of Nirodh users and their spouses.

Sample and Methodology

The study was conducted in Madurai district in Tamil Nadu in 1984-85. Madurai city, the district headquarters and Dindigul taluk (the biggest taluk in the district) represented the urban area. Four of the eight Urban Family Welfare Centres in Madurai city which serve a total population of about eight lakhs, were selected at random and the population served by them was taken for the study. In Dindigul, the entire population of one lakh was covered. The rural population comprised the population served by two randomly selected PHCs from among the 33 PHCs in the district.

A house-to-house survey of the selected urban and rural populations was initially carried out to identify Nirodh users, that is, ever users. Simultaneously, information was also collected about the contraceptive status of eligible couples. The list of current users thus obtained was cross-checked with the registers maintained by the peripheral family planning workers of these areas.

Ever users of Nirodh—both the men (husbands) and their spouses—were interviewed with the help of a structured, pretested questionnaire. The total sample comprised of 598 men and their spouses in the urban area and 187 men and their spouses in the rural area. In addition, all the 15 family planning workers from four Urban Welfare Centres and 48 from the two PHC areas were interviewed by using a questionnaire to elicit information on their perceptions and attitude to Nirodh as also its supply position.

Results

Identification of ever users and acceptance rates

As of 31st March 1984, the acceptance rate in Tamil Nadu for 'other' methods (pills and conventional contraceptives) was 0.5 per cent, while for sterilisation it was 30.6 per cent, and for the IUD, it was one per cent[5]. As against this, the acceptance rate for Nirodh as indicated by the present survey was 2.5 per cent in urban areas and 2.2 per cent in rural areas (Table 1).

Cross-check of sample with official records

According to the records maintained by the family planning workers, there were 135 current users in the urban area and 325 in the rural area. Our house-to-house survey identified 764 urban and 208 rural users. Of these, only one user in the urban and 32 users in the rural area were found to tally with the official records. This not only shows that even with a low rate of acceptance, the majority of Nirodh users were not listed in the records of the workers, but that the workers indiscriminately maintained lists which were grossly wrong and misleading. Further, while a large number of actual Nirodh users were not known to the workers, they maintained a list of users

TABLE 1
Contraceptive status of the survey population

Area	Population	No. of households	Population surveyed	No. of eligible couples	Contraceptive status					
					Sterilisation		IUD	Nirodh	Oral	None
					Female	Male				
Urban										
Madurai	1,89,410	33,042	1,16,806	19,220	4,475	177	322	292	39	72.4
		[519]*			(23.3)	(0.9)	(1.7)	(1.5)	(0.2)	
Dindigul	1,64,103	29,575	90,527	13,675	3,348	70	623	472	68	66.4
		[112]*			(24.5)	(0.5)	(4.6)	(3.5)	(0.5)	
Rural										
Kannivadi PHC	1,09,177	14,735	61,249	5,991	3,310	27	78	46	42	42.5
		]1089]*			(55.2)	(0.5)	(1.3)	(0.8)	(0.7)	
Keeranur PHC	40,020	6,147	27,357	4,532	1,743	34	48	162	11	55.8
		[520]*			(38.5)	(0.8)	(1.1)	(3.6)	(0.2)	

[ ]*indicates "doors locked". Figures in brackets denote percentages.
There is a wide variation among the urban and rural areas. Nirodh acceptance on average :
Urban - 1.5% + 3.5% / 2 - 2.5% ; Rural - 0.8% + 3.6% / 2 - 2.2%.
Current users: Urban - 764; Rural - 208.

most of whom were actually not using Nirodh. Moreover, it is surprising that the workers kept distribution records of a number of clients who, in reality, were not receiving Nirodh from them.

TABLE 2
Perception of family planning workers with regard to the people's and their own opinion about the usefulness of various contraceptive methods

Method	No. of workers who perceive people as liking the method	No. of workers who consider the method useful
Temporary		
Oral pill	7	3
IUD	17	5
Nirodh	7	3
Natural methods	-	-
Permanent		
Tubectomy	60	63
Vasectomy	8	6

Perceptions and attitudes of family planning workers

People's opinion about contraceptives as perceived by workers

Of the 63 family planning workers who were interviewed, 10 were male and 53 were female. Though a good majority of the workers advocated the use of Nirodh as much as they did tubectomy, the pill and IUD, they felt that as far as people's acceptance is concerned, the preference was predominantly for tubectomy; only seven thought that people preferred Nirodh (Table 2).

As regards their own opinion about various methods, it was surprising to find that only three considered Nirodh as a useful method. All the 63 workers mentioned tubectomy as "useful" while a handful thought so about vasectomy and the temporary methods. They also said that their supervisors gave importance only to tubectomy and did not generally talk about Nirodh when they came for supervision or at review meetings.

It was disappointing to learn that the workers themselves were not clear about who should be advised to use Nirodh and when. Only 24 said that it should be used "soon after marriage"; 60, 24 and 3 were of the opinion that it should be used after one child, two children, and three or more children respectively, while 10 felt that it should be recommended only to those who ask for it. Asked how they would decide as to whom they would advise and give Nirodh, 18 of the 63 workers said that it would "depend on parity", 40 said it would "depend on the birth interval", while 3 and 2 said that they would consider the "health condition" and "willingness of the couple" respectively.

Next, the workers' opinion was sought regarding the number of couples in their eligible couple register who should be motivated and supplied with Nirodh. Thirty-nine workers mentioned "less than 100", 18 between 100-200, and the remaining six said they could motivate more than 200 couples to use Nirodh. However, when asked how many they were actually supplying Nirodh to, all were found to be serving less than 100 users: 53 workers had less than 25 clients, 5 had between 25 and 50, and the remaining six had between 51 and 75 clients. The reasons given by about half (30) for poor acceptance of Nirodh were that people disliked it because it interferes with sexual pleasure, 12 felt that it was because of the greater emphasis on tubectomy, nine were of the opinion that the number of couples eligible for Nirodh was in itself small, and six said that people did not like free supplies as they felt shy to ask for them.

Only four of the 63 workers claimed that their stocks were inadequate. While 29 obtained replenishment of stocks every month, 25 did so as and when the need arose. Almost all found that they had sufficient stocks—49 had enough and 12 had a surplus; only two considered it insufficient and the reason given was "lack of stock". As regards quality, 55 received fresh stock while 8 received both fresh and old stock.

Seventeen of the 63 workers had used Nirodh themselves; five of them opined that it reduces sexual satisfaction while two said that they had been afraid of the Nirodh tearing during use (Table 3). Again, while 50 workers were willing to advocate the use of Nirodh, 13 were not in favour of doing so, the main reasons given being that "people do not care", "people feel shy", "gives less satisfaction", and "fear of not getting cases for tubectomy". Again, the lack of popularity of Nirodh as compared to tubectomy was largely attributed to people's greater "confidence" in tubectomy, "Government's emphasis on tubectomy", and "reduced sexual satisfaction". A smaller number mentioned lack of knowledge and shyness (in a joint family setting) as reasons for preferring tubectomy. Among suggestions for popularising Nirodh were greater propaganda and improvement in the quality of Nirodh.

Perceptions and experiences of users

As mentioned earlier, 598 husbands and their spouses and 187 husbands and their spouses who were using Nirodh were interviewed. Both urban and rural users were by and large educated (4 per cent of the rural users and 35 per cent of the spouses were illiterate), middle class, and predominantly Hindu and from the backward classes (as against forward class and scheduled castes and tribes).

Awareness and choice

Nearly 96 per cent of both urban and rural users were aware of contraception, mainly (90 per cent) through advertisements, magazines, the cinema and TV (the radio and medical/paramedical staff contributed 10 and 17 per cent respectively as sources of information). Urban males (husbands) perceived tubectomy and Nirodh as predominant methods accepted by couples whereas their spouses were of

TABLE 3
Workers' own experience and attitude towards Nirodh

		No.
Use of Nirodh	1. Yes	17
	2. No	46
Opinion of workers who using Nirodh were	1. Less complicated	2
	2. Good method	2
	3. Simple method	2
	4. Temporary method	4
	5. Less satisfaction	5
	6. Fear of tearing/conception	2
Willingness to advocate use of Nirodh	1. Yes	50
	2. No	13
If no, reasons	1. Temporary method	2
	2. Possibility of failure	1
	3. Less satisfaction/sexual pleasure	2
	4. People feel shy	4
	5. People do not care	5
	6. Fear	2
Reasons for lesser popularity of Nirodh as compared to tubectomy	1. More confidence/attention on permanent method (people/Govt.)	43
	2. Less satisfaction/not able to use in a hurry	23
	3. Lack of awareness	10
	4. Couples living in a joint family feel shy to use it	12
	5. Quality is not good (irritation, pain)	8
	6. People do not like it	10
Ideas for popularising Nirodh	1. Increase advertisement (audio-visual)	51
	2. Improvement of quality	13
	3. Make population education a part of education	4
	4. Incentives	1
	5. No opinion	6

the opinion that tubectomy was the most accepted method. Newspapers, magazines, books, the cinema and TV were among the common information sources for husbands while most of the spouses reported to have received contraceptive information largely from their husbands and friends.

With regard to previous contraceptive experience, only about 20 per cent of the urban users and 10 per cent of the rural ones reported to have used other methods—mostly the IUD and oral pill. The choice of Nirodh was predominantly attributed to its simplicity of use and safety (without side effects) by both husbands and their spouses in urban as well as in rural areas (Table 4). It is interesting to note that in the majority of the cases, it was the husband (urban: 80 per cent; rural: 87 per cent) who first expressed the desire to use Nirodh (the wife was responsible for suggesting it in only 3 and 2 per cent of urban and rural couples respectively while both were jointly responsible in 17 and 11 per cent of the cases respectively).

Time and duration of use

As is evident from Panel A of Table 5, Nirodh was adopted by over half the couples, both urban (51 per cent) and rural

TABLE 4
Distribution of respondents by reasons for choosing Nirodh

	Reasons*					
	Temporary method	Simple and comfortable	Fear of using other methods	For spacing children	No side effects or complications	Only method suitable for the male
Urban						
Husbands	46	391	98	55	136	5
Spouses	11	200	116	10	164	127
Rural						
Husbands	22	124	16	28	40	2
Spouses	8	60	22	85	27	9

* Multiple responses, therefore percentages not given.

(63 per cent) for spacing the first and second births, while over a fourth of urban and a fifth of rural couples did so after their second child had been born.

The duration of use, again by half the urban and rural couples, was between two and five years (Panel B, Table 5). Ninety nine per cent of urban and 97 per cent of the rural couples reported regular use: 52 per cent of all couples reported the use of between 4-9 pieces per month, about 30 per cent required more than 10 pieces per month.

Procurement of supplies

It is surprising to note that both urban and rural users did not take much advantage of the free supply of Nirodh through the primary health centres or family welfare

TABLE 5
Distribution of Nirodh users by time of acceptance and duration of use

A. When Nirodh was adopted

	Before first child	After first child	After second child	After 3 or more children	Total
Urban	5 (0.8)	303 (50.5)	168 (28.1)	122 (20.4)	598 (100.0)
Rural	3 (1.6)	124 (66.3)	36 (19.3)	24 (12.8)	187 (100.0)

B. Duration of use

	Occasional	< 1 year	2-5 years	6-8 years	8 years	Total
Urban	5 (0.8)	< 109 (18.2)	310 (51.8)	104 (17.4)	70 (11.7)	598 (100.0)
Rural	6 (3.2)	42 (22.5)	95 (22.5)	20 (10.7)	24 (12.8)	187 (100.0)

Numbers in brackets denote percentages.

centres (urban: less than 10 per cent; rural: less than 30 per cent). The distribution of Nirodh users according to the source of supply was as follows:

	Urban		Rural
Free supply	8	Free supply	28
Commercial supply	259	Commercial supply	112
Private*supply	65	Private*supply	2
Free & commercial	31	Free & commercial	24
		Free & foreign	2
		Private* & commercial	18
		Free, commercial & private*	1
Total	598	Total	187

* Private = brands other than Nirodh.

By and large, Nirodh users were observed to depend on medical stores, that is, they purchased Nirodh rather than obtained it free of cost. Nearly 90 per cent of urban users and 70 per cent of rural users also reported that their names had not been registered as clients with any government functionary or clinic. Further enquiry revealed that 53 and 44 per cent of urban and rural husbands respectively and 77 and 59 per cent of their spouses were unaware of the free supply of Nirodh. In fact, about 80 per cent of urban and 50 per cent of rural users who did know that Nirodh was available free of cost did not depend on the free supply. The predominant reasons for not availing of this facility were shyness, lack of time or that there was no need for obtaining it free. A few urban users also mentioned that the free supply was not readily available, and a few ascribed the non-use of free supplies to the poor quality of the condom. Among those who did depend on free supplies, only 16 per cent of urban users claimed to have experienced an interruption of supplies, and had to obtain Nirodh from medical stores or petty shops.

The responses as given by a sizeable percentage of those who had used both free and commercially available Nirodh or had used either free or commercially available (government) and other brands manufactured and commercially distributed by private companies indicated that the users had noticed or experienced differences between the different products: they reported that the private supply was soft, nice and lubricated. As regards storage, over 90 per cent of the users did not experience any difficulty in storing Nirodh in a private place at home—they kept it in a box or in the almirah.

Satisfaction among Nirodh users

Nearly 70 per cent of urban husbands and their spouses, and 70 per cent of rural husbands and 76 per cent of rural spouses expressed satisfaction with the use of Nirodh (Table 6). The reasons given by them were "freedom from fear of conception", "sexual pleasure is there fully", and "the method is simple and easy", in that order. Among those (30 per cent) who expressed dissatisfaction, "reduction in sexual pleasure" and "irritation and pain" were the main reasons; a few mentioned "white discharge" as a reason.

Asked whether they had any psychological or physical problems, 90 and 82 per cent of the 539 husbands and 491 wives in the urban sample, and 91 and 74 per cent of the 171 husbands and 139 wives in the rural sample replied that they had not had any problem at all. The problems as expressed by a small number of users were irritation and pain (urban: 44 husbands, 12 wives; rural: 7 husbands, 21 wives), tiredness (urban: 7 husbands, 6 wives; rural: 2 husbands, 2 wives), a "hot sensation" (urban: 10 husbands, 5 wives; rural: 7 husbands, 10 wives), white discharge (7 urban and 24 rural wives), and weakness (37 urban wives). When further asked whether the partner had expressed any difficulty, only a few replied in the affirmative. On the whole, therefore, the sense of satisfaction with Nirodh was quite high among both

TABLE 6
Distribution of satisfied Nirodh users by reasons for satisfaction

	Reasons*						
	Avoids conception	Physical satisfaction	Simple —easy	Spacing	Good for health	Economic benefit	No idea
Urban							
Husbands (N-402)	338	129	46	47	11	6	2
Spouses (N-463)	350	58	80	22	11	4	-
Rural							
Husbands (N-131)	128	30	17	15	5	-	-
Spouses (N-142)	95	14	23	15	1	-	-

* Multiple responses, therefore percentages not given.

urban and rural users.

Occasional non-use of Nirodh

Though almost all the users in the sample claimed to be regular Nirodh users, nearly 30 per cent of both urban and rural users reported having an occasional intercourse without using Nirodh. Only a small percentage of these respondents reported to have experienced the fear of conception; the rest had "not felt anything". The reasons given for having an occasional unprotected intercourse were "emotional feeling and lack of time to get up for a Nirodh" or "lack of stock".

In the same light, the users were asked whether they had practiced any other method alternatively. About 22 per cent of the urban users and 10 per cent of those in the rural areas reported the use of other methods in order to derive full sexual pleasure. Of these, a fifth of the urban users reported to have practiced safe period method whereas all the rural users had followed the withdrawal method by which there was no chance of conception.

Conception during the use of Nirodh

Fifty six (9.4 per cent) of the urban users and seven (3.7 per cent) of rural users reported that their wives had conceived while they were using Nirodh as the condom was damaged (reported by 39 urban and 5 rural users) or was "of old stock" (reported by 17 urban and 2 rural users). Half of the urban couples (29) had let the pregnancy continue while the other half (27) had it terminated. Among the seven rural users who reported a method failure, two continued with the pregnancy and five had it terminated.

Advocating use of Nirodh to others

The respondents were also asked as to whether the use of Nirodh was being treated as a secret. Their replies indicated that as many as 90 per cent of both urban and rural users had kept the matter a secret; a very small percentage of the respondents whose family members knew that they were using Nirodh, had not opposed its use or proved a hindrance.

When asked whether they had recommended or advised their friends or relatives to use Nirodh, it was surprising to note that nearly 63 per cent of urban husbands and twice as many (89 per cent) urban wives, and 67 and 88 per cent of rural husbands and wives respectively were not in favour, despite the high level of use satisfaction among them (Table 7). When questioned further, the main reason given was that they did not wish to divulge the fact that they were using Nirodh.

Discontinuation of Nirodh use

About a third (34 per cent) of the urban ever users of Nirodh and almost half (48 per cent) the rural ever users had discontinued the method, the main reasons being "not interested" or "want a permanent method" (Table 8).

TABLE 7

Distribution of Nirodh users by advice given to others for using Nirodh

	Advice given		When advice given				
	Yes	No	To newly married	After 1st child	After 2nd child	After 3 or 3+ children	Total
Urban							
Husbands	219	379	13	66	24	59	232
	(36.6)	(63.4)	(5.7)	(58.6)	(10.3)	(25.4)	(100.0)
Spouses	65	533	13	28	23	14	78
	(10.9)	(89.1)	(16.7)	(35.9)	(29.5)	(17.9)	(100.0)
Rural							
Husbands	62	125	–	24	31	7	62
	(33.2)	(66.8)		(38.7)	(50.0)	(11.3)	(100.0)
Spouses	22	165	1	13	8	–	22
	(11.8)	(88.2)	(4.5)	(59.1)	(36.4)		(100.0)

Numbers in brackets denote percentages.

TABLE 8

Distribution of Nirodh users by period of use and reasons for discontinuation

A. Period of use prior to discontinuation

	Number of users	When discontinued				
		Within a year of use	Between 2-5 yrs. of use	Between 6-9 yrs. of use	After 10 yrs. of use	Total no. who discontinued
Urban	598	56	94	43	12	205
		(27.3)	(45.8)	(21.0)	(5.9)	(100.0)
Rural	187	24	50	12	4	90
		(26.7)	(55.6)	(13.3)	(4.4)	(100.0)

B. Reasons for discontinuation

	Reason						
	Not interested	Complications	Want permanent method	Difficult to use	Do not need it	Want a child.	Total
Urban	108	24	42	6	8	17	205
	(52.7)	(11.7)	(20.5)	(2.9)	(3.9)	(8.3)	(100.0)
Rural	33	18	26	7	-	6	90
	(36.7)	(20.0)	(28.9)	(7.8)	(6.6)	(100.0)	

* Numbers in brackets denote percentages.

As can be seen from Panel A of Table 8, while about a quarter of both urban and rural couples had used Nirodh for less than a year, as many urban couples and about a fifth of rural couples had used it for over 5 years. The data further revealed that of the 205 urban couples who dropped out, 78 had accepted a tubectomy, 57 the IUD, 3 had opted for the pill, and 23 were using a natural method. Among their rural counterparts, 40 had opted for a tubectomy, 11 for the IUD, 2 the pill, and one was following the natural method. Considering the switch over to other methods and the fact that 8 and 7 per cent of urban and rural drop outs respectively had discontinued contraception as they desired a child, about 13 per cent of the urban and twice as many (33 per cent) of the rural drop outs had remained unprotected.

Perceived benefits of Nirodh and suggestions for improving the Nirodh programme

The predominant benefit as perceived by the Nirodh users was that of avoiding a pregnancy, though a fifth of all couples specifically mentioned its advantage as a spacing method (Table 9).

As regards measures for promoting the Nirodh programme, the users suggested free house-to-house supplies, more advertising, and improving the quality of Nirodh.

Discussion and Recommendations

The findings of the study suggest that the low acceptance of Nirodh is not related to any undesirable experiences or user perceptions. Rather, it is because the method has not been effectively popularised and promoted. The findings show very clearly that the national family planning programme has not been sufficiently geared to promote Nirodh as a contraceptive method: the administration, supervisors and providers have not given the Nirodh programme the necessary emphasis by providing adequate service facilities and mechanisms to monitor service delivery.

A large percentage of the users were not aware of the free supply showing thereby the poor communication and rapport of the health staff with the community. Most obtained supplies from commercial outlets for the sake of privacy or because obtaining free supplies was not convenient. They maintained a high degree of secrecy about using Nirodh. Also, a few users of other privately manufactured brands of condoms reported to have found them distinctly better—softer and lubricated—than the government manufactured product.

Nevertheless, Nirodh was found to be useful and effective by the majority of users as also physically and psychologically satisfying. On the basis of their perceptions and

TABLE 9
Perceived benefits of using Nirodh

	Avoid conception	Space births	Health of mother & child	Economic	No side effects	Prolongs sex act	Simple & safe	No benefits	No opinion
Urban									
Husbands	356	139	33	83	46	16	21	10	2
Spouses	544	94	41	49	9	4	4	11	3
Rural									
Husbands	171	37	5	29	–	–	–	5	–
Spouses	162	30	5	6	–	–	–	8	–

Multiple answers, therefore percentages not given.

experiences it may be concluded that Nirodh holds greater promise in terms of acceptance as well as effectiveness and freedom from complications and side effects than the IUD or oral pill. It is therefore, recommended that the emphasis in the national programme should be properly balanced so that this useful, effective and safe method is given the attention it deserves for advancing the family planning programme. Since it has been found that information about Nirodh has reached the people only to a small extent through advertisements and newspapers, immediate efforts must be made to intensify the spread of information through the media. These programmes should not only aim at giving correct information but at removing the sense of 'hush-hush' about Nirodh and making people accept it just as they do a consumer article or household commodity.

It would appear more prudent to invest in commercial distribution outlets and social marketing schemes because people, either in urban or rural areas, prefer to take their supplies according to the time and place convenient to them, and in confidence. Free supplies may be restricted by strict orders to be distributed only to those who genuinely ask for Nirodh at the clinic or from the field worker. The practice of leaving (or 'throwing' or 'dumping') Nirodh in houses just to show high distribution figures should be condemned because it not only gives a false picture but results in a colossal waste of Nirodh.

The Government should promote the sale of Nirodh through as many outlets as possible—grocer's shops, petty shops, departmental stores, general merchant stores, ration shops, chemists, public places and offices, as well as depot holders. It is also necessary to include instructions for use with suitable diagrams and in the packet as is done for many consumer items. In this connection it may be mentioned that while slot machines for Nirodh distribution were being tried out on an experimental basis, a pilot experiment conducted by the Gandhigram Institute of Rural Health and Family Welfare Centre with a device invented by an engineer, was found to be useful and practical in a sugar factory. However, for want of further funding and encouragement from the Government of India, the experiment was given up. The slot machine cost only Rs.700 at that time (in 1979). And finally, the quality of Nirodh should also be improved and made comparable to privately manufactured brands.

It is also suggested that worker targets for enrolling Nirodh users be removed to make it truly a people's programme, and conduct periodical assessments or surveys to determine the extent of Nirodh use. In any case, steps should be taken by the Departments in charge of implementing the programme to ensure accurate recording of users in the eligible couple register as also accurate accounting of distribution of Nirodh pieces. Adequate monitoring and supervision would make these records reliable.

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Maternal care and obstetric practice among the Konda Dora tribe

Mr. Jesurathnam Devarapalli

Introduction

Recent years have witnessed an increasing concern about the health of mothers and children who are considered as tribal, rural ands so on. Health planners have been constantly making a plea for improving maternal and child health services and as a result, various programmes and projects have been designed and implemented. Modern systems of medicine, increased awareness of hygiene and sanitation, and proper nutrition have been their major goals. Most of these programmes are implemented at the community level, targeted at a group of beneficiaries in this case, mothers and children (that is prenatal and postnatal care of mothers and health care of pre-primary school children). The success of such programmes is varied and traditional practices, taboos, etc. have been considered as barriers to their success.

Anthropologists studying the process of socialisation and childrearing among different cultural groups have been keenly interested in pregnanty and child birth[1-6]. The concept of pregnancy is associated with different systems which are cultural reflections of the society. The entire process of pregnancy and child birth is guided at different stages by a number of observations, rites and ceremonies as prescribed by the complex of norms and beliefs of the society: a pregnant woman is expected to observe a number of taboos and restrictions in her movements, activities and food habits.

Objectives

In light of this, an attempt has been made to study maternal health care and obstetric practice in a tribal group, the Kinda Dora, with a view to categorise them into practices which are harmful and may prove beneficial if avoided, those which are harmless, and those which are useful and medically acceptable, and can be encouraged. Such an understanding would go in a long way in helping community health workers and concerned health officials to direct their awareness and educational programmes so as to reinforce the useful cultural practices which are already being followed by this tribal community.

Results

Profile of the Konda Dora people

The Konda Dora is a tribal group living

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in the agency areas of Visakhapatnam district in Andhra Pradesh state. "They are completely at the mercy of the late immigrants, so much so that though they call themselves Konda Doras, they are called by the Bhaktas, their immediate superiors, Konda Kapus. If they are found living in a village with no Telugu superior, they are known as Doras—[7]. The Konda Dora speak Kubi or Konda Bhasha, a dialect of Telugu (the language of the state) which is spoken to some extent. Their staple food is Ambali made of millet flour, and liquor is generally consumed by both men and women.

Nuclear families are predominant, and though polygamy is permitted, the Konda Dora are basically monogamous. They follow totem divisions like Naga, Surya and Korra and the Telugu system of *Intiperlu* or surname-lineage. Agriculture, a mixture of dry land and shifting cultivation, is the main occupation supplemented by goat and cattle rearing. During the lean season, adolescent boys and even men hunt game. The Konda Dora worship their ancestors including women who have died before their husbands, the spirits of the hills and village deities and goddesses who are considered to protect them, their cattle and crops from disease. The village has a traditional panchayat under the leadership of a tribal headman, tribal headship being hereditary.

Pregnancy and child birth

Children are much desired and considered as a divine gift to the married couple. Believing in rebirth and that their dead are reborn in their families, the Konda Dora usually name their children after their ancestors. Barenness is looked down upon. Children are also an economic asset for the family: they help their parents even from the tender age of five years. The girls help their mother in the household work while the boys help their father in the fields and in gathering firewood and minor forest produce, rearing cattle and so on. Male children are preferred for they continue the family line; succession and inheritance are also passed through the male children.

Though the Konda Dora know how pregnancy occurs, they still believe in the role of the supernatural. For example, if a couple does not get a child for a long time inspite of an active sex life (for they believe that a single coitus would not cause pregnancy), they are said to suffer from the curse of the supernatural, and prayers and offerings are made to the gods. The sexual act is initiated by the man, and if the woman does so, she is considered to be aggressive and her behaviour is frowned upon; she must be always prepared to meet the man's urge. Love and affection between the wife and husband are not expressed openly for it is not considered as proper social behaviour.

The Konda Dora detect conception by the stoppage of the monthly menstrual cycle. The pregnant woman first reveals this to the elder women in the family and then to others in her peer group. She does not disclose the news to her husband or any other male member in the family due to shyness. The husband comes to know about it from the women folk.

Prenatal care

The Konda Dora woman normally works hard to meet the economic needs of the family. However, during pregnancy, she is slightly eased: she takes up less laborious work, but continues to work almost till the time of delivery. Dietary restrictions are imposed on her—beans (Dolicus species) are to be avoided as they are believed to cause epileptic fits in the mother and may even kill the foetus; this is strictly observed both before and after delivery, and during pregnancy she is not even allowed to approach a bean plant. She is also not allowed to take any liquor, as it is supposed to wash the foetus away. The Konda Dora woman are not known to express a desire for any special foods during pregnancy. Her normal diet includes gruel made of a local grain *(chodi ambali)*, dhal, tamarind-rasam, small dried fish and certain leaves collected from the forest. Other taboos disallow her to go to places which are suspected to be haunted or to go alone to the forest for fear of evil spirits who may harm her or the foetus (she is given a talisman by the 'agency guru' to protect her from the spirits).

The couple continue to have sexual intercourse as frequently as desired, even after the conception is confirmed. This is because they believe that the child born will be very small, slim and feeble if intercourse is rare during pregnancy. They do not keep an exact count of the gestation period. An approximate count is also used to predict the sex of the child: if the gestation period is more than nine months and extends to the tenth month (as per their inaccurate count), a male child is predicted.

The practice of taking the pregnant woman to her mother's house for delivery is totally absent among the Konda Dora. She is cared for by her husband and his family, though if her mother happens to live nearby, word is sent to her as soon as the daughter goes into labour. The midwife is also sent for. The pregnant woman's mother and older women including those of the family come to help her; they encourage her by sharing their experiences and telling her how they had successfully and fearlessly delivered their babies. If she has severe pain and is frightened, they try to put her at ease by making jokes about her cowardly behaviour.

Prior to this, as soon as she goes into labour, she is given a hot bath (to make the delivery easy), and made to sit on a mat placed outside the front of the house. The area around her is enclosed by blankets or old sarees. Unmarried girls are allowed to witness the event, but males are not allowed in the vicinity till she has delivered.

The midwife massages the woman's abdomen slowly and observes whether amniotic fluid is discharged. Though the midwives in this tribal region had been trained in safe obstetric practice, none of the midwives in the villages studied have had the opportunity of this training. There is a primary health centre about 4 km. away but the Konda Dora do not take their women to the centre for delivery because they are frightened of surgery and injections.

Child birth

As mentioned earlier, delivery takes place outside the house on a mat. The midwife and the women folk are present till the woman delivers her baby. Soon after delivery, the midwife ties a thread to the umbilical cord about two inches from the child's body and cuts it with the help of the sterilised knife (a clean knife heated on red coals, cooled and cleaned before use). She collects the placenta and umbilical cord in a basket and buries it at a distance from the hamlet. Turmeric paste is applied all over the child's body and it is washed with warm water; soap is used if available. After bathing, Pongamia seed *(kang)* oil is applied and the child is wrapped with small pieces of old and clean cloth and is laid on a cot or mat. The mother is also given a similar hot bath immediately, using turmeric paste and oil, and is dressed in clean garments. The knife used to cut the umbilicus is not cleansed and is kept covered under an empty tin and placed at the spot where the mother had her first bath after parturition. Her soiled clothes and mat are also not washed till the day of the purificatory bath which falls on the third or the fifth day whichever is auspicious.

Postnatal care

The mother and child are kept in seclusion till the day of the purificatory ceremony. They sleep in a corner of the living room and anyone coming from the field or forest is not allowed to approach them during this period. On the day of the purificatory bath, the midwife and the womenfolk take the mother and child to the nearby stream. The knife used for cutting the umbilicus is thrown away, the midwife washes the mat and the soiled clothes. After the mother and child are given a bath in the stream, the midwife offers prayers to the Gods to protect them from all evil, and salutes Bhumithalli (mother earth): she bends down and takes a pinch of earth and places it on the forehead of the child to protect it from sickness and disease. They return and enjoy a feast arranged by the father of the child. Only those womenfolk those who were present at the time of the delivery participate in the feast.

The midwife gives a black semisolid, water soluble substance to the mother to ward off evil spirits and disease. This is applied as a dot on the forehead of the child. The midwife is not paid anything on this occasion. She feels it is her obligation to serve the society and bless the mother and child. Her services are greatly valued and she is given due respect by one and all in the village.

After delivery the women remains completely at home for a minimum of one month, She is not given any hard work as the child needs to be fed often. She takes a bath every day in the evening hours, after dusk. But the child is bathed twice—in the morning and again in the evening. For the first few days, the new mother is strictly fed upon *ambali* and chilli powder. Later, she takes the normal family diet of vegetables, chicken, beef and small dried fish. Beef, chicken and mutton are preferred because they are said to help increase the production of breast milk. Coconuts and other like foods are prohibited during this period. Beans are strictly prohibited for a year.

Post-partum conjugal taboos are observed for at least two years as the Konda Dora believe that the child will not grow up to be healthy if the parents have sex. They are also aware of the fact that this would lead to another pregnancy and ultimately to a reduction of breast milk. This belief serves to maintain a sufficient interval between two successive pregnancies, and indeed facilitates the healthy growth of the child and the health of the mother. During this period though the wife and husband live under the same roof, they sleep separately; this demands a high degree of abstinence. Thus, though not intentionally, births are controlled by following these taboos.

Discussion

The various pregnancy-related taboos and cultural practices observed by the Konda Dora women have a significant impact upon the health of the mother and child. The prenatal and postnatal practices and taboos have both adverse and beneficial effects. They have been categorised into three groups—harmful practices, harmless practices, and beneficial practices that can be encouraged—and discussed under the different stages of MCH care—prenatal, child birth, and postnatal.

1. Prenatal practices: The midwife massaging the abdomen of the pregnant woman before delivery is a harmful practice.

   Forbidding the pregnant woman to go to so-called haunted places, or to eat beans, or to continue conjugal relations during pregnancy are practices which are not harmful.

   On the other hand, prenatal practices which need to be encouraged include giving the pregnant woman light work is a good practice. So also working (light work) throughout her pregnancy gives ample exercise to the expectant mother, promotes the healthy growth of the foetus and makes the delivery easy. Prohibiting the intake of liquor or going to the forest alone are other practices which merit promotion.

2. Child birth practices: While leaving the knife used to cut the umbilicus and the soiled clothes and delivery mat unwashed till the day of the purificatory bath are unhygienic and harmful obstetric practices, that of conducting the delivery outside the house in an enclosure, washing the baby with turmeric paste and warm

water soon after birth and the application of kang oil are harmless (kang oil acts as mosquito repellent).

The practice of giving the woman a hot bath once labour pains begin, and that of older women talking lightheartedly to her during labour give her psychological strength, are beneficial. The use of a clean knife, heated on red coals, cooled and cleansed is worthy of encouragement as the knife is being sterilised thus. The practice of burying the placental contents and bathing the mother with turmeric paste and hot water immediately after delivery as also the application of *kang* oil are other obstetric practices which may be promoted.

The Konda Dora do not take their women to the hospital for delivery; it is possible that in the hospital the woman has to stay alone in the maternity room with the midwife visiting now and then, whereas in her village, she is surrounded by her elders and friends who comfort her and give her the confidence to go through the ordeal. These practices can be regarded as an anxiety-relieving mechanism, and may be the reason why the Konda Dora woman prefers her own house to a hospital for delivering her baby. Allowing unmarried girls to witness a delivery, perhaps trains them for a future eventuality in their lives.

3. Postnatal practices: Feeding the new mother with chilli powder as an important constituent of her food for a few days after delivery is a harmful practice. On the other hand, keeping her and the child in seclusion till the day of the purificatory bath, the application of a dot on the child's forehead, avoiding beans and coconut in the mother's diet are harmless pratices. So also is exposing the child for a few minutes to the morning sun.

Again, several postnatal practices are worthy of encouragement. For example that of discarding the knife once used for the delivery, the mother bathing every day and bathing the child twice a day, and the preference for beef, chicken and mutton which enhances the nutritive value of the mother's food. The observance of postpartum conjugal taboos for a period of two years is another good practice which deserves to be encouraged as it helps maintain adequate spacing between successive pregnancies, ensures a longer period of lactation as well as the health of the mother and child.

In light of the above findings, health planners and health workers of tribal areas should take note of the cultural practices of their clients. To ensure good maternal and child health, and obstetric care, all the traditional practices of the tribals need not be disturbed; only those practices which are harmful need to be discouraged.

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Correlates of perinatal mortality in Lucknow city: Repeat study of a hospital's experiences

Dr. J.N. Srivastava

Introduction

Children in India face the risk of mortality early in life due to poor socioeconomic conditions, the age pattern of child bearing and lack of adequate antenatal and postnatal care of mothers. Childhood mortality is concentrated in the early days of life, particularly in the first week after birth[1]. Although child mortality precludes the stillbirth component of perinatal mortality, the underlying causes of late fetal deaths resulting in stillbirth are similar to those of early neonatal deaths[2] and in fact "the same etiological factors may contribute to both"[3]. It is often a matter of chance, whether a fetus will die *in utero* shortly before delivery or whether it will be born alive and succumb within the first minutes or hours of life. In certain cases a stillbirth may be saved only to end in a neonatal death[1]. Therefore, perinatal mortality—a term coined by Peller[4] to include late fetal and early neonatal deaths—constitutes a single problem of child loss.

An earlier investigation studied the level of perinatal mortality and its association with clinical and socioeconomic characteristics of the infants and their families based on the information contained in the case cards of 5,506 single births terminated in the Dufferin Hospital, Lucknow, the capital city of Uttar Pradesh state, between September 1976 and August 1977 period[5]. The present investigation repeats the study with corresponding information obtained from the same hospital during September 1986 to August 1987, with the purpose of studying changes in levels and patterns of perinatal mortality over the last ten years, as also the cause of early neonatal death.

Sample and Methodology

The data collected from hospital case cards pertained to 6,468 hospital deliveries which resulted in single births during the one year period, September 1986 to August 1987. The socioeconomic data included the mother's age, religion, family income and occupation of father; parity; period of gestation; birth weight and sex of the child, while the clinical information included presentation and type of delivery i.e. normal, breech, forceps, caesarean etc. In the case of early neonatal deaths, data on cause of death was

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also recorded.

The study hospital, Dufferin Hospital, run by the Uttar Pradesh Government, is the largest maternity hospital of Lucknow city and caters to roughly 15 per cent of the deliveries in the city. The next large hospital, Queen Mary's Hospital, which is a part of the Lucknow Medical College, caters to a somewhat smaller proportion of the city's deliveries. These two institutions offer free services but being a teaching hospital as well, the latter is less favoured by the orthodox section of the population. The rest of the deliveries are attended to in a large number of private maternity homes or at home.

In line with other hospital based studies, the estimate of perinatal loss is based on events during the post delivery hospital stay of the mothers. However, the hospital stay does not necessarily extend to the full first week of birth and in complicated cases, it extends much longer. Since early discharge from the hospital depends on the normality of the case, it is assumed here that mortality occurring in the first week and during the hospital stay, represents the total early neonatal mortality, i.e. all babies discharged earlier survive the first week of life. This assumption receives support from a study of nearly 6000 deliveries occurring during one year in Safdarjung Hospital, Delhi[6].

Results

Perinatal mortality levels

During 1986-87, out of a total of 6,468 single births, 427 were stillbirths and 152 were first-week deaths. Thus, the perinatal mortality rate was 89.5 per 1000 births (66.0 per 1000 stillbirth rate and 23.5 per 1000 early neonatal death rate). As compared to the earlier study[5] undertaken at the same hospital, perinatal loss appears to have increased over the last ten years (from 75.9 per 1000, constituted by 51.2 per 1000 stillbirth rate and 24.7 per 1000 early neonatal mortality rate).

In view of the increased health care provided by both government and private agencies during the ten-year period, this observation is rather surprising. However, a closer examination of the profiles of the delivery cases suggests some deterioration in the quality of the cases admitted to the reference hospital, which has made the rates of the two points in time non-comparable.*

The perinatal loss in the study hospital was comparable to that observed in Eden Hospital, Calcutta in 1978 and 1979[7] (85.1 per in 1978[8] (91.1 per 1000) and 89.5 per 1000 in a major teaching and referral hospital in Madras city[9].

Differentials by selected socio-demographic and pregnancy-related factors

Religion

Among the deliveries, 83.7 per cent were to Hindu parents, 16.1 per cent to Muslims, and only 0.3 per cent to Christian parents (Table 1, Panel A). As compared to 1976-77, the proportion of Muslim delivery cases increased by two percentage points with a cor-

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Although in numerical terms, events of single births in the study hospital have increased over the last ten years from 5506 to 6468, the proportion of such events to all deliveries in Lucknow city, has declined from about 25 per cent to 15 per cent. During the last ten years, a number of private maternity homes have cropped up in the city, which have apparently attracted the economically better-off, a possible reason for the deterioration in the socioeconomic composition of cases in the study hospital. A comparison of the profiles of the cases also suggests some deterioration in the quality of the cases over time. Cases of normal gestation of nine months and over have declined from 92.1 per cent to 90.4 per cent. The proportion of deliveries in the premature weight category (2500 gms. or less) has increased from 16 per cent to 22.5 per cent, the mean birth weight has declined from 2917 gms. to 2801 gms. and the proportion of 'caesarean' deliveries and 'IPV and crinotomy' has increased respectively from 3.6 per cent and 0.4 per cent to 13.1 per cent and 0.6 per cent respectively over the period. Therefore, the rise in the perinatal mortality rate in the study hospital over the last ten years may have resulted from a deterioration in the socioeconomic composition of the delivery cases in the J.L.N. Hospital, Ajmer.

responding reduction in the proportion of Hindu delivery cases.

Perinatal mortality (Table 1, Panel A) among Muslims was 112.6 per 1000 as compared to 85.0 per 1000 among Hindus, a statistically significant association. Both components of perinatal mortality were higher among Muslims than among Hindus but only the stillbirth rate attained statistical significance (Table 1, Panel A and Figure 1). This suggests that there may be a difference in the antenatal care provided to mothers in these two communities on account of their different cultural practices. Thus, expectant mothers belonging to the Muslim community constituted 'high risk' mothers requiring special attention.

Occupation of father

Out of 2388 delivery cases for which information on father's occupation was available, the majority (60.7 per cent) belonged to the service profession, followed by business (25.0 per cent), farming (7.4 per cent) and labour (6.9 per cent) (Table 1, Panel B).

Due to a more scientific classification criterion followed in classification in the present as compared to the earlier study, successive occupational categories represent, by and large, descending socioeconomic status of the family affected antenatal care practices, with the exception of the 'farming' category. With its rural background, modern antenatal care practices may not be generally followed in farming families. Therefore, with the exception of this category which had the highest perinatal morality, mortality in the other categories varied inversely with socioeconomic status (Table 1, Panel B and Figure 1). Inter-category differences were so large that perinatal loss in the two lowest categories was nearly double or more than that in the two highest categories. This negative association was highly significant ($X^2 = 52.0$).

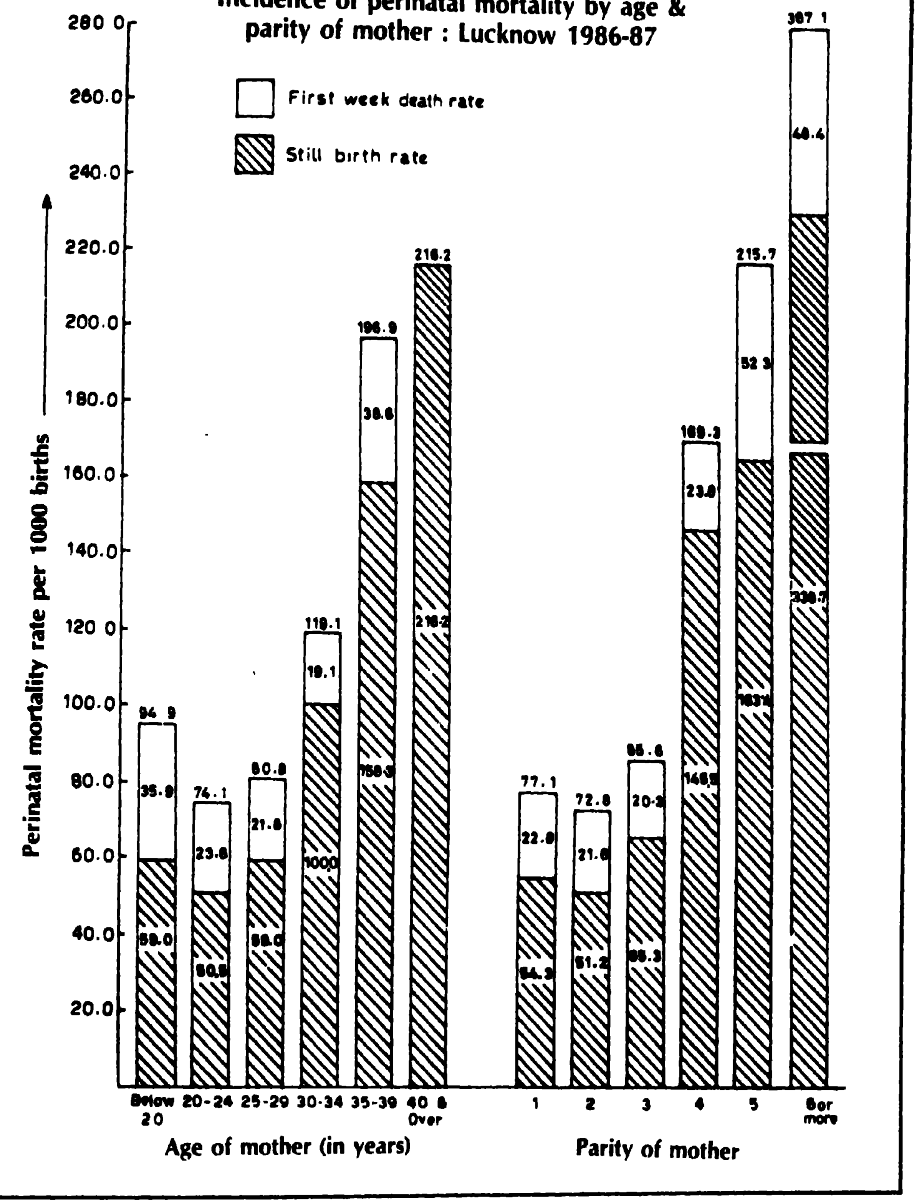
TABLE 1

Perinatal mortality rate by religion, father's occupation, and family income

	No. of deliveries	Stillbirth rate	First-week death rate	Perinatal mortality rate
A. *Religion*				
Hindu	5410	62.3	22.7	85.0
Muslim	1039	86.6	26.0	112.6
(N-6449)		$X^2 - 8.35$***	$X^2 - 0.40$	$X^2 - 8.14$**
B. *Father's occupation*				
Service	1449	47.6	24.2	71.8
Business	597	63.6	16.8	80.4
Farming	177	169.5	50.8	220.3
Labour	165	115.2	42.4	157.6
(N-2388)		$X^2 - 65.1$*	$X^2 - 8.4$***	$X^2 - 52.0$*
C. *Income (Rs.)*				
Below 300	409	112.4	41.6	154.0
300-499	1275	74.5	29.0	103.5
500-749	1203	55.7	20.0	75.6
750 +	633	22.1	15.8	37.9
(N-3520)		$X^2 - 54.42$***	$X^2 - 8.86$*	$X^2 - 48.10$***

X^2 values in Panel A relate to one degree of freedom while those in Panels B and C relate to three degree of freedom.
* - $P < 0.05$; ** - $P < 0.01$ and *** - $P < 0.001$.

FIGURE 1
Incidence of perinatal mortality by age & parity of mother : Lucknow 1986-87



The two components of perinatal mortality—stillbirth rate and first-week death rate—were also negatively associated with occupational status a in similar fashion. The negative association was highly significant in case of the former (x^2=65.1; df=3-) but barely significant in the case of the latter (x^2=52.0; df=3-). The findings suggest that differences in antenatal care practices could be responsible for this variation which is significantly influenced by the father's occupation, possibly x^2 on account of the influence of the latter on living conditions. Further, expectant mothers belonging to the 'farming' and 'labour' categories constituted 'high risk' cases, which require special attention.

Family income

Out of only 3520 delivery cases for which information on family income was available, 11.6 per cent belonged to families with incomes below Rs. 300 per month and 18.0 per cent, though the bulk of the families (70.4 per cent) belonged to families with incomes in the two intermediate ranges of Rs. 300-749. Due to inflation between the two ten-year time periods, a comparison between this and the earlier distribution is not possible.

The analysis of perinatal mortality by income of family brought out a negative relationship. With an increase in family income a consistent and highly significant decline was observed not only in perinatal loss but also in its two components (Table 1, Panel C and Figure 1). A similar negative relationship was revealed by the earlier study[5] in the study hospital and others[10]. Thus, expectant mothers from families with incomes below Rs. 500 per month, had a perinatal mortality rate which were three to four times higher than that of mothers in the highest income group, and constituted 'high risk' mothers, who require special attention in regard to nourishment and health care.

Age of mother

Excluding six cases for which the mother's age was not known, perinatal mortality rose sharply from the under 20 age group to the 20-24 age group and showed marked declines thereafter for each succeeding five year-age group (Table 2, Panel A). Compared to the earlier study, there has been a decline in the proportion of deliveries below age 20 and above age 29, suggestive of a relatively lower fertility in the present sample.

Perinatal loss exhibited a J-shaped relationship with maternal age. The mortality rate was the lowest in the 20-24 ages (74.1 per 1000). It was higher in the under 20 group (94.9 per 1000), but increased mildly in the 25-29 age group 25-29 (80.8 per 1000) and sharply in each succeeding five year age group. The relationship between maternal age and perinatal loss was highly significant. A similar relationship was observed in the earlier study at the same hospital[5] and other studies[10-12] using data from other hospitals in Lucknow city and the neighbouring city of Kanpur. As in the earlier study, the incidence of stillbirths also showed a J-shaped distribution in relation to maternal age, being lowest in the age group 20-24 and increasing steadily and sharply with increase in age; it was also higher in ages below 20 years. Early neonatal mortality was not significantly associated with age; it exhibited a more U-shaped distribution. The findings again suggest that ages 20-29 years are the safest for reproduction and carry the minimum risk of perinatal loss (Table 2, Panel A and Figure 2).

Parity

Excluding 59 cases for which information on parity is not available, two-fifths of deliveries (39.1 per cent) occurred to mothers of first parity and one-third (33.2) to mothers of second parity; the number of deliveries showed a consistently sharp decline with increase in parity and were fewest at parity six and above (Table 2, Panel B). Compared to the earlier study, a marked decline in the proportion of deliveries of fourth and higher parities was noticed pointing once again to the lower fertility of the present sample.

The perinatal mortality rate evidenced a J-shaped relation with parity of mother. In conformity with the findings of the earlier investigation in the study hospital[5] and other studies in Lucknow[10,12] and Kanpur[11], perinatal mortality was lowest among second parity mothers and relatively higher among first parity mothers (Table 2, Panel B and Figure 2). Thereafter, the perinatal mortality rate exhibited consistent and sharp increases. The association between perinatal loss and parity was highly significant. Both components of perinatal mortality showed a J-shaped distribution in relation to parity but only the stillbirth rate exhibited a significant association. Thus, first, third and higher parity deliveries constituted 'high risk' cases. Further, besides demographic

TABLE 2
Perinatal mortality rate by maternal age and parity

	No. of deliveries (N - 6452)	Stillbirth rate	1st week death rate	Perinatal mortality rate
A. Age (years)				
Below 20	390	59.0	35.9	94.9
20-24	2674	50.5	23.6	74.1
25-29	2202	59.0	21.8	80.8
30-34	890	100.0	19.1	119.1
35-39	259	158.3	38.6	196.9
40 & over	37	216.2	0.0	216.2
		X^2-76.4*	X^2-5.0	X^2-62.5*
B. Parity	(N - 6408)			
1	2505	54.3	22.8	77.1
2	2130	51.2	21.6	72.8
3	1180	65.3	20.3	85.6
4	378	145.5	23.8	169.3
5	153	163.4	52.3	215.7
6+	62	338.7	48.4	387.1
		X^2-128.3*	X^4-8.2	$X^4$123.9*

X2 values relate to four degrees of freedom.
Brackets indicate groups pooled for testing.
* - $p < 0.001$

grounds for avoiding higher parity births in India, the findings of this study show an additional reason for avoiding births above second or at most third parity, namely, to keep perinatal loss at a minimum.

Parity by age

Table 3 presents an analysis of the incidence of perinatal loss by parity for selected maternal age groups, in which there were a sizeable number of first parity cases.

In each maternal age group, mortality was observed to rise with an increase in parity, particularly above parity three. Another finding with an important policy implication is that a first birth is associated with the lowest perinatal loss if it occurs when the mother is between 25-29 years (Table 3).

Period of gestation

An overwhelming majority (90.4 per cent) of the 6,394 deliveries for which the gestation period had been recorded, took place at or slightly after the normal nine-month period. About 7.5 per cent occurred between the eighth and ninth month of gestation, 1.6 per cent at 7-8 months, and 0.4 per cent prior to 7 months of gestation (Table 4, Panel A). As compared to the 1976-77 sample, the proportion of cases exhibiting a normal gestation period was lower by 1.7 percentage points.

As in the earlier study[5,12], perinatal mortality was negatively associated with the duration of gestation and sharply declined towards the end of the normal gestation period (Table 4, Panel B). The relationship between the two was obviously very strong and highly significant. Both the components of perinatal morality exhibited sharp declines with an increase in the gestation period, and the negative association was highly significant in both cases. Thus, the

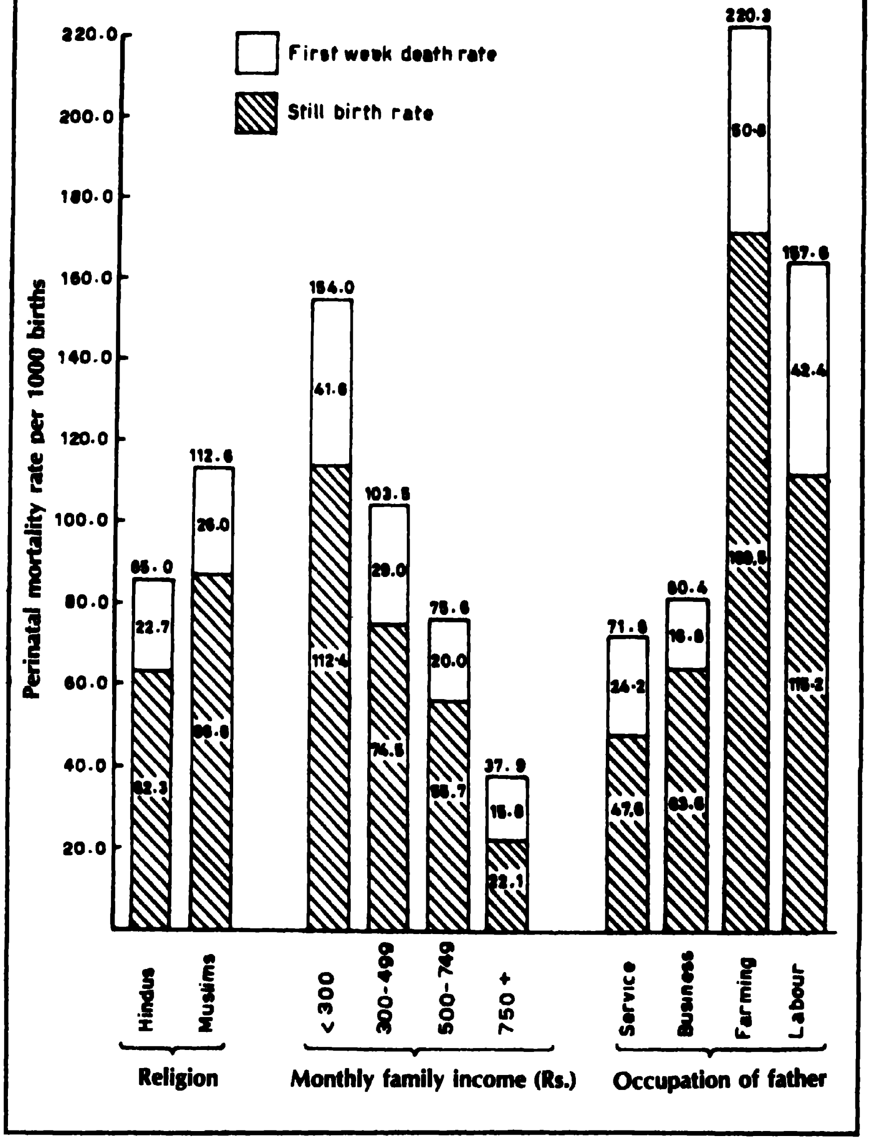


FIGURE 2
Perinatal mortality by religion, family income & father's occupation

probability of safe delivery and survival of premature babies is very much lower and they continue as 'high risk' cases.

Birth weight

Another criterion of prematurity is the birth weight of the newborn. The Expert Group on Prematurity of the World Health Organisation[13] regards babies with birth weight of 2500 gms. or less as premature, irrespective of the length of gestation. According to this criterion, 22.5 per cent of the deliveries were premature. As compared to 1976-77, the proportion of premature deliveries in terms of birth weight showed an increase from 16 per cent to 22.5 per cent.

The perinatal mortality rate displayed an inverted J-shape relationship with the birth weight of the babies. The rate sharply declined with an increase in the birth weight from 777.8 per 1000 in the highly premature weight group of below 1000 gms to 40.3 per

TABLE 3
Perinatal mortality rate by parity in selected maternal age groups

Age group (years)	Parity	No. of deliveries	Stillbirth rate	First-week death rate	Perinatal mortality rate
Below 20	1	340	58.8	41.2	100.0
	2	46	65.2	0.0	65.2
20-24	1	1478	52.8	23.0	75.8
	2	888	49.6	23.7	73.2
	3	239	33.5	20.9	54.4
	4 & 5	46	108.7	21.7	130.4
25-29	1	562	51.6	12.5	64.1
	2	879	50.1	25.0	75.1
	3	543	58.9	20.3	79.2
	4	144	118.1	20.8	138.9
	5	42	119.1	71.4	190.5
	6 & 7	13	153.9	153.9	307.8
30-34	1	102	78.4	9.8	88.2
	2	258	58.1	7.8	65.9
	3	303	85.8	19.8	105.6
	4 & 5	194	159.8	25.8	185.6
	6 & 7	22	318.2	45.5	363.6

1000 in the mature weight group of 2500 to 3000 gms. and further to 33.3 per 1000 among babies weighing 3000-3500 gms. at birth, but rose moderately above this weight (Table 4, Panel B). The negative association of perinatal loss with birth weight was highly significant. This finding is slightly different from that observed earlier in which the perinatal mortality rate declined consistently with an increase in birth weight up to the highest weight group of 4000 gms. and above[5]. However, it conformed to the findings of the Kanpur study[11] and a field study in Kinshasa, Zaire[14] which showed an increase in the perinatal mortality rate in babies weighing over 3500 gms. at birth. However, perinatal loss of babies weighing over 2500 gms. at birth was quite low.

The stillbirth rate also exhibited an inverted J-shaped relationship with birth weight. It declined sharply from 666.7 per 1000 among babies weighing less than 1000 gms. at birth to 23.3 among babies weighing between 3000-3500 gms. at birth, and rose above this weight group (Table 4, Panel B). The association between the two was highly significant. The first-week death rate, on the other hand, exhibited an almost consistent and sharp decline with an increase in birth weight indicating a highly significant negative relationship. This suggests that while the higher birth weight of the baby (above 3500 gms) impairs the prospects of safe delivery, it improves the survival prospects of babies which are born alive. Since the birth weight of the child reflects the state of the mother's health and the nourishment she receives during pregnancy, antenatal care would go a long way in reducing the incidence of perinatal loss.

Sex of child

As found in other studies in India[10-12] and elsewhere[2] and in earlier study in the reference hospital[5], the perinatal mortality rate was found to be markedly higher among male babies than among female babies, 23 per cent higher in this study (Table 4, Panel C) despite the lower birth weight of the latter (2757.4 gms vs. 2839.4

TABLE 4
Perinatal mortality rate by period of gestation nature of delivery, birth weight, and sex of child

	No. of deliveries	Stillbirth rate	First week death rate	Perinatal mortality rate
A. *Gestation period (mths)*				
Less than 7	27	407.4	259.3	666.7
7-8	109	367.0	201.8	568.8
8-9	478	154.8	48.1	202.9
9+	5779	50.5	16.8	67.3
(N=6393)		$X^2 = 297.5$*	$X^2 = 239.2$*	$X^2 = 530.6$*
B. *Nature of delivery*				
Normal	5299	53.6	20.8	74.4
Breech	188	276.6	58.5	335.1
Forceps	85	141.2	47.1	188.2
Caesarean	852	52.8	28.2	81.0
IPV and crinotomy	37	810.8	54.1	864.9
(N=6461)		$X^2 = 505.0$*	$X^2 = 16.3$**	$X^2 = 440.6$*
C. *Birth weight (in grams)*				
Below 1000	18	666.7	111.1	777.8
1000-2000	285	238.6	217.5	456.1
2000-2500	1110	88.3	38.7	127.0
2500-3000	2905	32.0	8.3	40.3
3000-3500	1503	23.3	10.0	33.3
3500-4000	385	46.8	5.2	52.0
4000+	76	65.8	0.0	65.8
(N=6282)		X2=352.3*	X2=523.9*	X2=824.5*
D. *Sex*				
Male	3412	70.9	26.7	97.6
Female 3050	59.3	20.0	79.3	
(N=6462)		$X^2 = 3.53$	$X^2 = 4.12$***	$X^2 = 7.62$**

* = $p < 0.001$; ** = $p < 0.01$; *** = $p < 0.05$. X^2 values in Panels 'B' and 'C' relate to four degrees of freedom while those in Panels D and A relate to one and three degrees of freedom respectively.

gms.). The association between sex and perinatal loss was statistically significant.

Both stillbirth and first-week death rates were higher among male than among female babies, and the association between the latter and the sex of the infant was statistically significant (Table 4, Panel C).

Differential by clinical factors
Type of delivery

Over four-fifths (82 per cent) of the 6461 deliveries for which information on type of delivery was available were normal. The remaining (18 per cent) cases presented complications, and included cases of breech (2.9 per cent), forceps (1.3 per cent), caesarean (13.2 per cent) and 'IPV and crinotomy' (0.6 per cent) (Table 4, Panel D).

Perinatal mortality in the case of normal deliveries at 74.4 per 1000 births was less than half the loss observed in cases of complication (154.9 per 1000). Among the complicated deliveries too, mortality varied widely by type of delivery from as high as 864.9 per 1000 in case of 'IPV and crinotomy' to a low of 81.0 per 1000 in case of caesarean deliveries (Table 4, Panel D). This association was statistically significant and matched that the observation made by the earlier in the reference hospital[5].

Causes of early neonatal mortality

Since the cause of stillbirth can be determined only by performing an autopsy, we have confined our analysis to studying the cause of death of neonates who died in the hospital, as obtained from the doctor's notings on the case cards. However, since 'prematurity and low birth weight' has been considered as an independent cause of death, the other causes given here relate to deaths occurring to mature and normal weight babies (Table 5).

TABLE 5
Causes of first-week death

Cause of death	No. of cases	Percentage
Prematurity and low birth weight	81	53.3
Maternal death	8	5.3
Antepartum hemorrhage	1	0.6
Toxemia of pregnancy	3	2.0
Congenital defects	7	4.6
Trauma and asphyxia	26	17.1
Other postnatal causes	9	6.0
Jaundice and hemolytic disease	1	0.6
Unknown	16	10.5
Total	152	100.0

Prematurity and low birth weight constituted the most important single cause of death accounting for over half (53.3 per cent) of the early neonatal deaths. The next major category, 'trauma and asphyxia', was which responsible for 17.1 per cent of these deaths, followed by 'unknown causes' (10.5 per cent). Other causes of early neonatal mortality each accounted for less than 5 percent of such deaths (Table 5). The findings reveal that the first two causes accounted for over 70 per cent of early neonatal mortality which can be significantly reduced by providing expectant mothers with proper nourishment and ante-natal medical care, taking adequate precautions at the time of delivery and in handling and feeding the child during its first crucial week of life.

Conclusion

The findings indicate a perinatal mortality rate of 89.5 per 1000 single births among deliveries performed in the reference hospital during 1986-87. Compared to the findings of a similar study conducted ten years ago, perinatal loss was observed to have risen, due to a deterioration in the quality of the delivery cases admitted to the hospital over the period.

As analysed in relation to selected socio-demographic and obstetric characteristics, the incidence of perinatal morality was found to be significantly influenced by the age of the mother, parity, period of gestation, birth weight and sex of the child. An important finding with regard to parity was that unlike the findings of the present study and many others, first parity birth carried the least risk if it occurred between the ages of 25 and 29. Perinatal mortality was also significantly related to religion, family income and the father's occupation.

The study helped identify 'high risk' pregnancies in terms of the above characteristics; providing mothers from these groups with the necessary antenatal and postnatal care would reduce the incidence of perinatal loss and thus enhance the prospects of both safe delivery and child survival during the crucial first week of birth. These are pregnancies of mothers aged below 20 and over 30 years, and of parity three, from Muslim families and families characterised by low incomes, and occupations related to farming and labour. Women from these families, exhibited short gestation periods, gave birth to low birth weight babies (especially male), and did not have a normal delivery. Findings relating to the cause of early neonatal death—'prematurity and low birth weight' and 'trauma and asphyxia' which accounted for over 70 per cent of the loss, have similar implications. Most of the findings of this study bear equal relevance to pregnant women who deliver at home, particularly in rural areas, where for lack of facilities, the proportion of hospital delivery cases is negligible: they draw attention to the lack of maternal and child health care service in the family welfare programme.

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Fertility and family planning in Bangladesh

Dr. Ubaidur Rob and Dr. George Cernada

Background

Bangladesh, the eighth most populous nation in the world is also one of the poorest with a per capita income of less than US-200. Although it enjoys a tropical monsoon climate, it is a country with unique geographic peculiarities which distinguish it from the rest of the sub-continent. An alluvial land criss crossed by numerous rivers, the plains of Bangladesh are submerged in water for about half of the year, magnifying the effect of natural disasters such as floods. Its economy is primarily agricultural and it has traditionally depended on the export of agricultural products, especially jute and tea.

Bangladesh has a land area of 56,000 thousand square miles and is divided into 64 districts, which are the secondary units of administration. Districts are in turn divided into *upzilas*, union, wards, and villages. A typical *upzila* has an area of about 80-120 square miles, a population of about 0.25 to 0.30 million and is the primary administrative unit.

Population growth patterns

The 1991 Census reported a total population of approximately 115 million in Bangladesh. The population density of 2050 persons per square mile was among the highest in the world. The population has been growing at an alarming pace. Over the past three decades it has risen from 42 million in 1951 to 115 million in 1991. The annual growth rate was between 1.7 to 2.4 per cent in the intercensal period 1951-1991. During the period prior to 1900, it grew at a very slow pace, never exceeding an annual growth rate of less than one per cent, presumably due to recurring famines and epidemics which had kept mortality at very high levels[1,2].

Ethnic and religious composition

The socio-cultural and political systems that have existed in Bangladesh have been described extensively[3-6]. In describing social life, the authors have observed two characteristics which distinguish the Bengali population from the rest of the Indian subcontinent: first, the linguistic homogeneity and second, Islamisation of the local culture and traditions. These distinctive features can be found in the socio-cultural institutions, mental outlook, way of life, food, dress, and manners and customs of the Bengali people.

The Muslim conquest of Bangladesh in

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the early 13th century changed its sociocultural composition. The population of pre-Muslim Bangladesh was composed mainly of Hindus, Buddhists, aboriginals and Jains. Despite the significant number of Buddhists, Hindus were then the dominating group in political power, social position and also in economic affluence. During the Muslim period, a large section of the Buddhists, and a considerable number of Hindus, of both low and high castes, accepted Islam. The Muslim population of Bangladesh then consisted of two groups, migrant Muslims from Arab countries and converted Muslims from the local population. During the entire Muslim period and during half of the British period, Hindus were the majority group in Bengal. In 1991, 88 per cent of the total population was Muslim compared to 80 per cent in 1961.

Family structure

In Bangladesh, the family is extended, patrilineal and patrilocal. It generally consists of a senior couple; their married sons, wives and children; unmarried children and perhaps some widows or divorced sisters of the men. Kinship is primarily traced through men. The senior male is the head of the family and controls the family lands. As long as the father heads the family, household management rests with the mother. The married sons and daughters-in-law are expected to obey her. The extended family acts as a unit of economic production. One's kinship relations determine one's loyalties, social status and political power. The extended family and family lineages are very important in social structure. Early marriage for females is customary. In rural areas, many marry before the age of 16. Most marriages are arranged and brides are generally selected by the couple's parents. Following marriage the wife goes to live with the husband and his family.

Economy

Bangladesh is predominantly an agricultural country, and agricultural techniques are poorly developed. A small proportion of people are engaged in trade and commerce. In the rural agricultural environment, the village serves as an important social unit. Physically, the village is situated around paddy fields, near waterways or roads. Villages are contiguous and are identified by names. Their size varies significantly. Houses are built of mud or bamboo and are thatched, though one often sees a few made of brick and wood.

In rural areas, land is the basic source of income and production: ownership of land determines an individual's position and status within the village. The division of labour within a village is governed by a number of factors which include social status, age, and sex. In general, villagers are classified into three groups based on their landholding. Landowners who own a significant amount of land are classified as upper class. In most cases, the upper class cultivate their land through share cropping or leasing out to landless farmers. The middle class consists of small landowners and tenant farmers. They are the majority in the village. The last group, the landless, either work as day labourers or cultivate the large landowners' lands as share croppers. Limited but expanding opportunities for young women are present in garment production in urban areas.

Education

The literacy rate in Bangladesh is below 30 per cent; males: 33 per cent, females: 19 per cent. In general, there are two types of education, religious and formal. Religious education can be divided into two categories; first there is education needed to perform prayers and other religious duties (particularly Muslim). A large proportion of Muslim children go to mosques to learn the Quran, which is written in Arabic and every Muslim has to memorise the required verses for daily prayers. The second kind of religious education combines both formal and religious education, and is known as madrasa education. In a madrasa, students learn how to read and write in Bengali, English and Arabic.

Status of women

The status of Bangladeshi women is lower than that of men. The low female literacy rate is a serious handicap. The religion of Islam also instructs women to observe purdah. Furthermore, in the Quran, it is specifically mentioned that women should not be seen by non-relative males in any circumstances. Where adhered to strictly, it virtually rules out any job for women where non-relative males are employed. Thus, it is clear that the social and cultural environment does not allow women to work outside the home. This is especially true in the rural areas, where women who work outside the household are of low status. Yet, due to recent economic changes several hundred thousand young women are employed in export-oriented garment factories in several large cities.

Fertility

Until recently, Bangladesh had been characterised by high fertility and comparatively high mortality. Despite many limitations in the vital registration system, there is now considerable documentation that the fertility pattern is changing[7-9]. The higher fertility has been attributed to a combination of social, cultural and economic factors such as the lack of employment opportunities for married women outside the home, the low level of urbanisation, the low level of per capita income, the lack of educational opportunities for females in rural areas, an agriculture-based economy, and most importantly, societal attitudes toward reproduction[10-14].

Table 1 presents the crude birth rates (CBR) observed in Bangladesh for selected years. The rates presented in Table 1 are obtained from various sources, and are subject to varying sampling and non-sampling errors. Nevertheless, the findings suggest that the CBR fluctuated around 50 per thousand population until the mid)1960s, and that in recent years there has been a rapid decline.

TABLE 1

Crude birth rate, Bangladesh: 1962-1987

Year	Crude birth rate	Source
1962-65	53.0	Population Growth Estimate, 1962-65
1967-68	42.0	National Impact Survey, 1966-68
1974	48.3	BRSFM, 1974
1976	47.0	Bangladesh Fertility Survey, 1975
1979	47.0	ICDDR, B Matlab
1980	45.5	ICDDR, B Matlab
1981	43.8	ICDDR, B Matlab
1981	43.0	Planning Commission, GOB
1982	44.6	ICDDR, B Matlab
1983	42.4	ICDDR, B Matlab
1984	37.3	ICDDR, B Matlab
1984	46.6	ICDDR, B Sirajgonj
1985	44.5	ICDDR, B Sirajgonj
1985	39.0	Planning Commission, GOB
1985	42.5	ICDDR, B Matlab
1986	40.0	ICDDR, B Matlab
1986	38.9	USAID, Dhaka
1986	39.6	ICDDR, B Sirajgonj
1986	38.0	National Family Planning and Fertility Survey
1987	40.6	ICDDR, B Sirajgonj

The findings from national and subnational surveys[7-9, 15-18] suggest that the total fertility rate (TFR) has remained at more than 4.5. TFR estimates presented in Table 2 are from different sources and also are subject to methodology problems. In a strict scientific sense, they are not comparable. In addition, data from retrospective fertility surveys may suffer from various types of errors which may bias demographic measures. The findings of the 1989 Bangladesh Fertility Survey (BFS) do suggest though, that between 1980 and 1987 fertility has declined by nearly 30 per cent.

TABLE 2
Total fertility rate, Bangladesh: 1963-1988

Year	TFR	Source
1963-65	7.1	Population Growth Estimate, 1962-65
1967-68	6.0	National Impact Survey, 1966-68
1974	7.1	BRSFM, 1974
1975	6.4	Bangladesh Fertility Survey, 1975
1979	6.3	Contraceptive Prevalence Survey, 1979
1979	6.9	ICDDR, B Matlab
1981	6.3	ICDDR, B Matlab
1984	6.4	ICDDR, B Sirajgonj
1985	6.1	ICDDR, B Sirajgonj
1985	5.9	ICDDR, B Matlab Comparison Area
1986	5.5	ICDDR, B Matlab Comparison Area
1986	5.6	USAID, Dhaka
1986	5.4	ICDDR, D Sirajgonj
1986	5.6	National Family Planning and Fertility Survey
1987	4.8	ICDDR, B Sirajgonj
1987	4.8	Bangladesh Fertility Survey, 1989
1988	4.6	Bangladesh Fertility Survey, 1989

The family planning programme

Family planning activities primarily confined to urban areas were first started by voluntary organisations in the early 1950s. The national public sector family planning programme was launched by the Ministry of Health and Population Welfare in 1965 with the deployment of part-time male and female workers to rural areas. Special attention was given to promote long-term contraceptive methods, that is, the IUD and sterilisation. In 1969, the newly gathered momentum of family planning was halted due to political unrest. During 1972-75, the Government of Bangladesh was primarily engaged in reconstruction work after independence, and family planning services were not available in rural areas.

In 1975, a separate directorate within the Ministry of Health and Population Welfare was established to provide family planning services. Several organisational steps were taken to co-ordinate family planning in conjunction with health service delivery. The reorganised programme withdrew part-time male workers and deployed females in large numbers as front-line field workers of the programme. In addition, health and family planning clinics were established in the rural areas to provide clinical contraceptive services.At present, the Government programme extends throughout rural Bangladesh, and includes a community based component provided by a work force of 23,000 female field workers, as well as clinical services provided at 3,700 union-level Family Welfare Centres and 464 upzila health complexes.

The Government of Bangladesh views rapid population growth as a serious and high priority problem, and the national population programme is an integral component of Bangladesh's development plans. The President of the country provides direct and visible leadership. The Government recognises that rapid population growth is one of the country's foremost problems mitigating against development efforts and undermining socioeconomic gains. Strategies to reduce fertility include the integration of health and family planning service delivery systems at the grassroots level, the provision of a wide range of contraceptive choices together with the expansion of quality sterilisation services, and the intensive training and coverage of field workers. In the public sector, the population programme is implemented by the Ministry of Health and Family Welfare in co-ordination with eight other development ministries.

In 1989, the Government formed the National Council for Population, a national-level policy and co-ordinating body chaired by the President of the country, further affirming its commitment to population and family planning activities. The Government's broad demographic goal is to achieve a net reproduction rate of one by 2010 AD,

TABLE 3
National family planning programme performance in Bangladesh, 1980-91

Year	Sterilisation Vasectomy	 Tubectomy	 Total	IUD	Injectable (Doses)	Oral pill (Cycles)	Condom (Pieces)
1980	20,062	185,200	205,262	41,601	112,010	8,137,744	87,111,780
1981	42,750	202,441	245,191	83,663	81,065	7,751,352	93,230,412
1982	96,834	301,930	398,764	171,743	72,697	8,257,995	116,821,488
1983	115,591	290,766	406,357	181,933	104,700	8,870,693	127,784,886
1984	307,654	336,820	644,474	400,482	140,969	10,945,343	157,369,137
1985	168,562	144,282	312,844	403,413	189,030	11,796,166	127,332,364
1986	203,336	127,932	331,268	397,589	262,163	13,101,871	139,871,345
1987	129,944	115,499	245,443	395,181	350,815	16,822,802	160,306,345
1988	101,278	119,987	221,265	386,020	468,570	22,060,990	168,068,974
1989	85,176	129,839	215,015	329,363	817,156	28,167,361	196,305,849
1990	67,367	122,793	190,160	351,014	1,604,227	38,987,034	163,275,908
1991	74,523	95,606	170,129	267,094	1,910,835	45,903,08	143,271,85

with a targeted reduction of the birth rate through a series of intermediate Five-Year Plans. The short-term objective has been to attain a contraceptive prevalence rate of 50 per cent by the end of the Fourth Five-Year Plan (1990-1995).

The Government stresses sterilisation as one of the important methods of birth control. The programme emphasis is reflected in introduction to clients, provider and referral incentives, launching of intensive campaigns and large-scale training of physicians. The national sterilisation programme was launched in 1966 initially with males. The performance on vasectomy reached its peak in 1969 with 389,500 sterilisations, and subsequently declined and continued at a low level till 1980. Since 1981, it has again started to rise and a level of over 100,000 procedures per year has been sustained to date.

During the last ten years, the Government has taken a series of policy and organisational decisions to promote the family planning programme, particularly sterilisation services in rural areas. Consequently, sterilisation performance has increased substantially and reached its peak in 1984. The most important policy decision was the recruitment of full-time female family planning workers to cover rural areas. Another step was the integration of family planning services with the health care system at the local service level. Although the decision to integrate health and family planning services was taken several times, it was never implemented at the field level until 1983. The introduction of referral fees for IUD and sterilisation clients and subsequent changes in the payment procedure also has affected programme performance. Table 3 presents the family planning performance at the national level.

From the very beginning, family planning activities in Bangladesh have been based on the strategy of providing information, education and motivation to couples to help them understand the value of a small family. The programme facilitates, the supply of temporary methods and makes them easily available to couples. That the Government emphasis a cafeteria approach is evident from the extensive network established for temporary modern methods, dispensing of the pill without a medical prescription, free services, and a system of payment of transportation cost for IUD clients and refer-

TABLE 4
Per cent of currently married women aged 15-49 practising contraception by age, 1979-1991

Age (years)	1979	1981	1983	1985	1989	1991
< 20	5.2	9.5	9.1	9.2	14.6	18.7
20-24	11.1	17.6	18.1	21.7	25.1	32.6
25-29	13.8	23.8	24.2	33.5	36.4	45.6
30-34	17.0	25.3	26.7	35.6	44.2	52.5
35-39	17.1	23.2	29.4	34.4	44.8	57.0
40-44	15.9	23.4	19.0	26.4	34.9	46.4
45-49	9.2	12.5	11.4	15.0	21.7	29.9
All	12.1	18.6	19.1	25.3	31.4	39.9

rers, and insertion fees to service providers. It should also be noted that under the present system, sterilisation services are offered only to those with two living children where the last child is at least two years of age.

The contraceptive use rate rose from 12.7 per cent in 1979 to approximately 40 per cent in 1991 (Table 4). These findings suggest that during the period 1979-1991 women under age 40 have been increasingly adopting family planning. The proportion of currently married women in aged 15-49 who were using a contraceptive increased from 12 per cent to over 40 per cent over the twelve-year period.

During 1979-1991, the total current usage of contraception increased five-fold. Much of the total increase in contraceptive use between 1979 and 1991 was due to the increased adoption of two methods—the oral pill and female sterilisation (Table 5). Data from the 1991 Contraceptive Prevalence Survey (CPS) indicate that contraceptive prevalence

TABLE 5
Current use of contraception among currently married women under 50 by method in the 1975 BFS and 1979, 1981, 1983, 1985, 1989 and 1991 CPSs

Contraception status	BFS 1975	CPS 1979	CPS 1981	CPS 1983	CPS 1985	CPS 1989	CPS 1991
Modern methods (total)	5.0	8.9	10.9	13.8	18.4	24.4	31.2
Oral pill	2.7	3.6	3.5	3.3	5.1	9.1	13.9
Condom	0.7	1.5	1.6	1.5	1.8	1.9	2.5
Vaginal method	0.0	0.1	0.3	0.3	0.2	0.2	0.1
Injection	0.0	0.2	0.4	0.2	0.5	1.1	2.6
IUD	0.5	0.2	0.4	1.0	1.4	1.7	1.8
Tubectomy	0.6	2.4	4.0	6.2	7.9	9.0	9.1
Vasectomy	0.5	0.9	0.8	1.2	1.5	1.4	1.2
Traditional methods (total)	2.7	3.8	7.7	5.4	6.9	7.0	8.7
Safe period	2.2	3.9	2.4	3.8	3.8	4.7	-
Withdrawal	0.2	1.8	1.3	0.9	1.2	2.0	-
Abstinence	0.8	1.2	0.4	0.5	0.5	0.5	-
Other	0.6	0.7	1.4	1.7	1.7	1.5	-
Total use rate	7.7	12.7	18.6	19.1	25.3	31.4	39.9

TABLE 6
Per cent distribution of currently married women aged 15-49 practising contraception by specific method, 1975-1991

Method	BFS 1975	CPS 1979	CPS 1981	CPS 1983	CPS 1985	CPS 1989	CPS 1991
Modern method	64.9	70.1	58.6	71.7	72.7	77.7	78.2
Oral pill	35.0	28.3	18.3	17.3	20.2	29.0	34.8
Condom	9.1	11.8	8.6	7.9	7.1	6.1	6.3
Vaginal method	0.0	0.8	1.6	1.6	0.8	0.6	0.3
Injection	0.0	1.6	2.2	1.0	2.0	3.5	6.5
IUD	6.5	1.6	2.2	5.2	5.5	5.4	4.5
Tubectomy	7.8	18.9	21.4	32.4	31.2	28.7	22.8
Vasectomy	6.5	7.1	4.3	6.3	5.9	4.4	3.0
Traditional method	35.1	29.9	41.4	28.3	27.3	22.3	21.8
Total	100	100	100	100	100	100	100

Others includes safe period, withdrawal, abstinence and Kabiraji

rose from 31.4 in 1989 to 40 per cent, primarily due to an increase in the use of oral contraception.

It is clear that there have been considerable changes over time in the relative percentages of users relying on specific methods. The change in the proportion of users relying on female sterilisation is particularly striking (Table 6). In 1975, only 8 per cent of currently married women were sterilised. This percentage rose to 22.8 in 1991. The use of the oral pill apparently decreased in 1983 and increased subsequently. Table 6 also shows an increase in the relative popularity of injectables. Although the increase between 1979 and 1985 was not significant, the use of injectables doubled between 1989 to 1991.

NGO role in the family planning programme

An important feature of the Government's policy has been to encourage the participation of non-governmental organisations in family planning service delivery. In Bangladesh, NGOs have played a valuable role in the development of the family planning programme. At present, over 400 NGOs operate in various areas of the country covering different aspects of MCH and family planning and related activities. To date, NGO activities have concentrated essentially on service delivery in urban areas. Most are involved in community distribution of contraceptives, while a few are engaged in clinical service.

The operational efficiency elements of NGOs can be identified with respect to a number of features: flexibility in operations, both managerial and financial; better quality input in personnel and logistics; possibility of closer supervision; better salary and incentive; and, most importantly, relatively easy hiring of competent and firing of incompetent workers.

Among the major NGOs are the Bangladesh Association for Voluntary Sterilisation, the Family Planning Association of Bangladesh, the Social Marketing Project, the Pathfinder Fund, Concerned Women for Family Planning, the Asia Foundation, and the International Centre for Diarrhoeal Disease Research. According to Government estimates, NGOs presently provide family planning services to approxmately one-fifth of the total population, and account for about one-third of the total couple years of protection (CYPs) nationally. In the following sections, major successful NGO projects in Bangladesh are described.

Bangladesh Association of Voluntary Sterilisation (BAVS)

BAVS is a non-governmental organisation established in 1974 to offer quality sterilisation services. The first clinic opened in 1975, and at present 25 clinics offer sterilisation services throughout the country. The clinics are primarily located in urban areas and staffed by qualified surgeons and counsellors. Until May 1987, BAVS recruited clients through field agents, most of whom were non-literate. The field agents were classified as registered and unregistered and were paid a fixed amount of money per case referred. In addition, registered field agents received a monthly salary for referring a fixed number of clients every month. Unregistered field agents were eligiblle for registration if they referred a fixed number of clients for three consecutive months. Table 7 presents the number of sterilisations performed in BAVS clinics during 1975-86.

TABLE 7
Number of sterilisations performed in BAVS clinics, 1975-1986

Year	No. of clinics	Vasectomy	Tubectomy	Total
1975	2	2781	1948	4729
1976	2	2063	5148	7211
1977	4	3739	7117	10856
1978	7	2634	15602	18236
1979	22	3048	22965	26013
1980	23	2821	31440	34261
1981	25	14509	36891	51400
1982	25	23970	43032	67002
1983	28	30401	37977	68378
1984	34	60760	41551	102311
1985	34	23022	14814	37836
1986	34	33732	16005	49737
Total		203244	274685	477970

Although BAVS clinics are located in urban areas, over 80 per cent of the acceptors came from rural areas. This proportion of rural acceptors remained approximately the same over 1975*1986. The vast majority of the population is Muslim, and the findings indicate that over 80 per cent of the sterilised clients are Muslims; the remaining 20 per cent are primarily Hindus.

The male-female sterilisation ratio varies over the years. At the beginning of the BAVS programme, female sterilisations predominated. The male-female sterilisation ratio peaked in 1980, when 11 female sterilisations were performed against one male sterilisation. However, it dropped to 2.5 in 1981 and declined gradually, beginning 1982. By the end of 1984, the number of male sterilisations performed in BAVS clinics exceeded the number of female sterilisations.

Since inception till 31 December 1986, BAVS performed 477,970 sterilisations, or approximately 16 per cent of the total sterilisations performed in the country. Furthermore, if we assume that on the average a sterilisation generates 10 CYPs and 3.5 CYPs are needed to prevent one birth, the BAVS programme has prevented approximately 1.5 million births.

ICDDR, B Matlab Project

In 1977, ICDDR, B started an experimental family planning and MCH programme in a rural sub-district of Bangladesh. Findings from the project demonstrated that family planning programme can be successful even under unfavourable socio-economic conditions. In 1990, three of every five eligible women residing in the project area were contraceptive acceptors and the total fertility rate was below four (Table 8).

The Matlab Project started as a comprehensive family planning programme with only basic MCH services. Over a period of ten years, several other interventions such as tetanus and measles immunisation, oral rehydration therapy, train-

TABLE 8

Per cent currently practising contraception by method: Matlab treatment area and comparison area, 1990

	Treatment Area		Comparison area	
Variables	Percent	(N)	Percent	(N)
Current User	57.1	(2418)	27.2	(1009)
Modern methods				
Oral pills	21.1		29.9	
IUD	6.2		2.4	
Injectables	49.9		4.1	
Condom	1.4		1.5	
Tubectomy	14.7		34.8	
Vasectomy	0.7		0.9	
Foam/Jelly	0.2		0.4	
Sub-total	94.2		74.0	
Traditional methods				
Withdrawal	1.4		4.6	
Kabiraji	1.7		7.6	
Rhythm	2.6		13.5	
Other	0.0		0.3	
Sub-total	5.7		26.0	
Current non-users	42.9	(1820)	72.8	(2699)
Total	100.0	(4238)	100.0	(3708)

ing of traditional birth attendants and the provision of safe delivery kits, limited nutrition education were added. The findings suggest a gradual rise in contraceptive use in the treatment area over the last 13 years—starting from below 10 per cent, it increased to 33 per cent in mid-1979 and to approximately 45 per cent in 1984.

An important component of the Matlab programme is the presence of female community workers, most of whom are contraceptive users. In addition, there is a well-developed support system of female paramedical and medical staff, and field supervision. Except sterilisation, all other contraceptives are delivered at the household or community level. In addition, experiences from the project suggest that the introduction of an organisational culture based on qualification and performance with quality of care has succeeded in raising the performance to levels much higher than those of the Government programme.

ICDDR, B Extension Project

The sharp increase in the contraceptive prevalence rate and its consequent impact on fertility in the Matlab project area raised question of its replicability in other areas of Bangladesh. In order to test the feasibility of incorporating the lessons learned from Matlab, ICDDR,B, in collaboration with the Government, started a project, called MCH-FP Extension Project, in two other *upzilas* of Bangladesh.

The ICDDR,B interventions were designed to strengthen the knowledge and supervisory capabilities of mid-level Government officials to implement programme activities at the field level. The primary objective was to train the Government field workers about the client-oriented motivational approach. Several four-week on-the-job training programmes were conducted at the field level to discuss family planning, oral rehydration, tetanus immunisation, household visiting patterns, motivational techniques, community relations, referrals and record-keeping.

In the ICDDR,B Extension Project areas the contraceptive use rate is substantially higher than the national rate. The findings indicate that the programme performance in the Government can be improved by introducing simple interventions. The findings of the ICDDR,B Extensive Project suggest that household visiting patterns, motivational techniques, community relations referral and record keeping are critical to success or failure in a large scale Government programmes.

Bangladesh Women's Health Coalition (BWHC)

In 1980, the Bangladesh Women's Health Coalition (BWHC) was established to provide clinic-based contraceptive services in the urban slum areas. Over the years, its services expanded to include MCH care and BWHC established five urban clinics. At present, the BWHC clinics offer clinical contraceptives, menstrual regulation; treatment of diseases related to MCH and immunisation. In addition, the Government Family Welfare Visitors are trained to perform menstrual regulation in the BWHC clinics. BWHC also provides one-week refresher training to the FWVs.

According to BWHC data, a clinic provides health, family planning and child care services to approximately 1,500 clients in a month. The findings suggest that there is a great unmet demand for menstrual regulation and family planing acceptance could be increased through personalised services, sustained contacts and motivation. The BWHC started its activities by providing menstrual regulation services, and then expanded to other areas related to MCH. In Bangladesh, the BWHC clinics are considered as a model for provision of contraceptive services to the urban slum population.

Munshiganj MCH-FP Project

During 1979-87, the Ministry of Health and Family Welfare and the German Technical Assistance Agency jointly carried out an operations research project to strengthen the family planning services delivery capacity of Family Welfare Centres. The objective was to test various interventions and their impact on programme performance. The project tested several simple interventions such as improved management information systems at different levels, training and supervision, monitoring and evaluation, and supply of contraceptives. The common features of these interventions were on-the-job training and monthly staff meeting to discuss field problems. The findings suggest that the performance of the Government family planning programme can be substantially improved with simple interventions.

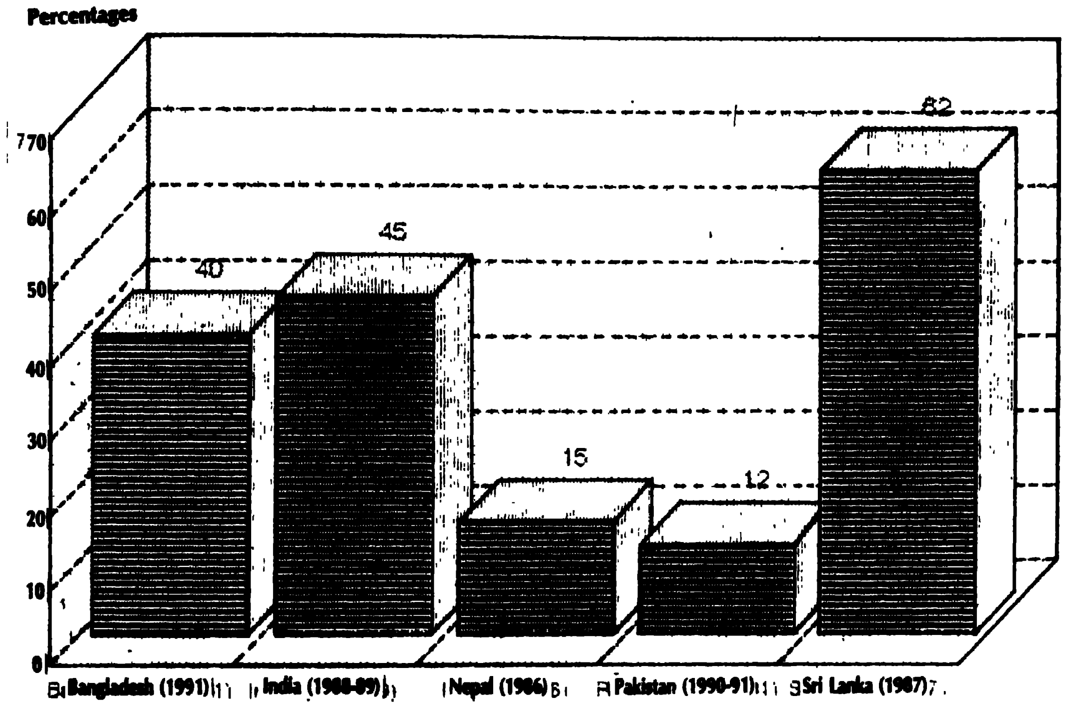
Several authors have identified the determinants of a successful NGO programme and listed them as leadership, flexibility, training, management and supportive supervision, client-oriented approach, etc. Because of the special inputs involved in NGO programme it is not reasonable to expect that models of successful programme can be replicated in tact for application at the national level. However, several successful NGO demonstration projects have identified factors affecting programme performance and suggest possible ways to improve these factor in more cost-effective ways.

Conclusion

In recent years the success of the Bangladesh family planning programme has been impressive. Findings suggest that the contraceptive use rate has increased from less than 10 per cent in 1975 to over 40 per cent in 1991. During 1975-89 the Bangladesh family planning effort has been classified using an index of 30 programme indicators as "strong" with a 70 per cent score, ranking as the ninth strongest programme in 98 developing countries in 1989 when adjusted for "social setting" [19] Bangladesh has the strongest level of programme effort among the "low" social setting countries. During 1975-1990, total fertility rates dropped from 6.4 to 4.6. Among countries classified as "low social setting"[19] Bangladesh's 22 per cent decline in total fertility rate among developing countries in 1975-1990 is the greatest. The involvement of NGOs in the family planning programme played a key role in the success story.

Having an intensive rural village-based outreach system, continuous expansion of service delivery sites, learning from demonstration projects, strong national political support, active assistance of NGOs, a strong IEC effort, a social marketing approach to contraceptive supply, all played a major part in the success of the programme to date. A sense of its achievement can be gained by seeing its contraceptive prevalence rate in the context of other South

FIGURE 1
South Asian Countries :
Estimated contraceptive prevalence as per cent of married women aged 15-49



Adapted from :— World Bank, World Development Report 1991, Oxford Univ, Press, N.Y., 1991.
— Population Reference Bureau, 1991 World Population Data Sheet, Washington, D.C., 1991.

Asian countries many of which share its difficult socio-economic conditions (Figure 1). The programme still has a long way to go to reach its goal of a contraceptive prevalence rate of 50 per cent by 1995 but prospects are hopeful.

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News and Notes

Global Media Award for "The Journal of Family Welfare"

We are pleased to announce that *The Journal of Family Welfare* has been named a recipient of the 1992 Global Media Awards for Excellence in Population Reporting.

The Awards, instituted by the Washington—based Population Institute, recognise the contribution of the journalistic and electronic media in creating awareness of population problems. The Awards will be presented at a ceremony to be held at United Nations Headquarters in New York on 26th January 1993. The Award comes to The Journal of Family Welfare in the category of Best Population Journal.

The Population Institute is a non-governmental public education organisation supported by private funds. The Institute produces POPLINE, a bimonthly news and feature service which is provided to over 2,100 daily newspapers worldwide, correspondents in 159 countries and U.S. policy makers. Mr. Werner Fornos is President of the Population Institute.

IPPF Family Planning Congress

A galaxy of international family planning experts, long-time volunteers and workers of the family planning movement worldwide, and representatives of IPPF Member Associations and NGOs gathered in New Delhi in October 1992 to celebrate the 40th Anniversary of the International Planned Parenthood Federation (IPPF), in the country of its birth. The events included IPPF's triennial Members' Assembly, and a three-day International Family Planning Congress, the first ever to be organised by the Federation, sandwiched between the business meetings of the Assembly, and rounded off by an eloquent valedictory speech by Dr. Karan Singh, former Union Minister of Health and Family Planning, at a closing session chaired by Mrs. Avabai B. Wadia, President, FPAI.

The IPPF Members' Assembly which preceded the Congress, was inaugurated at a glittering function in New Delhi's stately

Subroto Gardens on 21st October 1992. Extending a warm welcome to the distinguished gathering of family planning experts; key government officials; representatives of international organisations, NGOs and Member FPAs, Mrs. Avabai B. Wadia, President, FPAI and Immediate Past President of the Federation, said that the Federation had made a beginning four decades ago with eight founder Member Associations including the FPA of India; it now has a global presence in 134 countries and is the largest voluntary family planning organisation. This rapid growth is an eloquent expression of the felt needs of people, to acquire knowledge and undertake the practice of having children by choice and not by chance, in order to give them a better future in life, she added. Referring to India's Eighth Five Year Plan in which the non-governmental sector is being called upon to play a bigger role, Mrs. Wadia urged NGOs to make the 1990s a decade of action and achievement.

Mr. M.N. Fotedar, Union Health and Family Welfare Minister threw open the Members' Assembly and Congress by lighting the traditional lamp. In his inaugural address, he said "for us the limited family norm is not a distinct theoretical idea; the very basis of our economic and social upliftment endeavour is dependent on the speedy translation of this concept into reality".

Presenting a Citation to Mr. Fotedar in recognition of India's continuing commitment and support to the family planning movement, Dr. Fred Sai, President of IPPF, pointed out that India was the first country to introduce a family planning programme, and deserves high praise for drawing the world's attention to the need for family planning. Dr. Halfdan Mahler, IPPF Secretary General, cautioned that all attempts to curb the exploding population must have their moorings not on government dictates or compulsion, but in consciousness and conscience, while building consensus and providing choice.

The Family Planning Congress

Echoing the 40th anniversary theme of "Meeting Challenges: Promoting Choices", the Congress provided a fresh insight into the international family planning movement—its accomplishments, shortcomings and future challenges—and helped renew commitment to a cause vital to the very sustainability of our planet. It was organised jointly with the UNFP, WHO, World Bank and other international agencies.

Opening the Congress, Dr. Mahler stated that family planning is the "success story of development'. It has made an extraordinary difference in the lives of tens of millions of women and influenced individuals in their daily lives: in the way they deal with their sexuality, the number of children they have, and how they can space and take care of them.

Three brilliant keynote addresses reiterated the multiple benefits of family planning—on improving child survival and maternal health, enhancing family life, and moderating population growth—and stressed the central place of women in the development process. They also set the right tone for the three-day Congress.

Dr. Nafis Sadik, Executive Director of the United Nations Population Fund, described target-driven programmes as neglecting "the essential element of human contact between provider and acceptor, to take less time with clients, to regard acceptance as the end of the process rather than the beginning". She complimented the Indian government for abandoning target-led policies and programmes.

All the three keynote speakers as also several others pleaded for greater choice and respect for clients. "The real challenge to family planning associations operative in various countries is not merely making people aware but to provide the needy people with adequate contraceptives," argued Professor Mahmoud Fatalla, Chair of the IPPF International Medical Advisory Panel. He said that universal family planning availability should be a priority target for all governments and the health community, and that the family planning movement started by women for women should continue to be guided by women's perspectives and women's concerns.

Mr. Stephen Sinding of the Rockefeller Foundation argued that in most countries current and prospective unmet need for family planning suggests that reasonable demographic goals can be met without any resort to coercion if services of reasonable quality are offered. This is feasible, financially and administratively, he added, if governments, donor agencies and NGOs will commit sufficient resources: of the order of US $ 5.9 billion annually by 2000.

Through parallel symposia and as many as eight simultaneous panel discussions, the Congress addressed a wide array of issues including the effectiveness of family planning programmes, the unmet need for family planning, policy and ethics, contraceptive technology, AIDS prevention, and future challenges for IPPF and the role of FPAs. The key message was the urgent need to convert the unmet need for family planning into positive practice.

Addressing the plenary session following the keynote addresses, Mrs. Usha Vohra, Secretary to the Ministry of Health and Family Welfare, said that the containment of population is not merely a function of couple protection or contraception, but of female literacy, marriage age of girls, position of women, and infant loss. She called for greater funding for contraceptive research and efforts to reach the less privileged large northern states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh.

Dr. R.P. Soonawala, Vice President and Hon. Medical Director, FPAI, who had the honour of delivering the Guest Lecture, gave a brilliant exposition of India's family planning programme since its inception. Mr. E.S. Lala, Secretary General, FPAI, made a lucid presentation the Association's experience of moving into the first phase of strategic planning, as a part of the presentation of the Challenges Project to the Members' Assembly. The other FPAs who presented their experiences were Kenya, Korea and Honduras.

FPAI also participated in two of the panel discussions: Dr. M.C. Watsa, Consultant SECRT, gave a very comprehensive presentation of the unmet needs of Indian youth at a panel discussion chaired by Mr. Lala, while at another panel discussion on quality of care, Dr. Ruby Baam, Medical Officer, Training, and Dr. Sheila Kulkarni, Assistant Director Medical, discussed FPAI's experiences in relation to medical audits and patient flow analysis.

In a closing statement to the Congress, Dr. Sai reiterated the need for stepping up resources. He said: "We know what must be done for health reasons, for human rights reasons, and for development reasons. What we don't have are the necessary resources to meet the need, because many countries do not have the political commitment that is vital for family planning programmes. We need to make the politicians and governments of donor and recipient countries put their money where their mouths are." Dr. Sai said family planning spending must double in the next few years to meet the currently unmet need for services and information. (While the lives of millions of mothers and children have been saved through family planning, with global contraceptive prevalence growing to as much as 51 percent, some 500 million couples wanting to plan their families still have no access to family planning). "Since we know that family planning is a key element in sustainable development, we must impress on the donor governments the importance of stepping up their assistance from the present US $ 1 billion to at least US $ 4 billion by the end of this decade", he added.

The Delhi Declaration

"IPPF:

Noting that in the last four decades family planning has become a global movement and noting that the demand for family planning will increase from approximately 300 million users at present to more than 600 million by the year 2000;

Recognizing that the promotion of family planning, sexual and reproductive health for all marks a major challenge for IPPF in the 1990s. which will help people everywhere to lead socially and economically productive lives and to take control of their own destinies;

Recognizing that linked to the concern over sexual and reproductive health is the pressing issue of the practice of unsafe abortion, an issue on which IPPF and its member associations can no longer remain silent in the face of such a major threat to the health and lives of millions of women;

Acknowledging that one of the major barriers to the improvement of women's sexual and reproductive health, and consequently the well-being of their families, is women's lack of decision-making power at all socio-economic levels;

Acknowledging that an increasing number of young people are sexually active but are without proper access to sexual health information, education or services because most societies, and IPPF and Family Planning Association (FPAs), are still reluctant to address these issues;

Recognizing that successfully addressing the need for Quality of Care is key to the future viability and continued credibility of IPPF and FPAs as the conscience of the family planning movement;

Recognizing that the increasing incidence of sexually transmitted diseases, including AIDS, is an alarming development;

We, the representatives of Family Planning Associations gathered together in IPPF's 40th Anniversary Year (1992) in New Delhi, India, at the 6th Members' Assembly of IPPF;

Call upon FPAs to work with governments and all interested groups in order to meet the above mentioned needs of all individuals and especially the marginalized and under-served segments of society;

Call upon FPAs to promote family planning and sexual and reproductive health for all;

Call upon FPAs to play an active role in publicizing the nature and extent of unsafe abortion and its effect on the lives, the sexual and reproductive health of women, and in identifying and implementing effective and stategic solutions;

Urge IPPF and its member associations to strengthen their resolve to gain equality for women in all aspects of IPPF's work;

Call upon FPAs to work for removal of institutional barriers to programmes for young people, which will not only prevent the rising incidence of adolescent pregnancy, abortion and sexually transmitted diseases, but will also help young people to realize their sexuality in a positive and responsible manner, and

Call upon FPAs to develop and maintain high quality, sustainable family planning, sexual health and reproductive health programmes.

We, the representatives of member FPAs of IPPF, which have campaigned for family well-being for 40 years, *Resolve* to take the above measures as a serious commitment to the Federation's Strategic Plan, and *Pledge* to undertake to intensify our efforts at the international, regional and national levels and agree to be held accountable, individually and collectively, for being the conscience and the leader of the family planning movement in the non-governmental sector.

The IPPF, at the conclusion of the Congress, renewed its pioneering "brave and angry" commitment to fight or the rights of individuals worldwide to plan their families and adopt a Vision 2000 Strategic Plan to guide its work in the next decade.

The Delhi Declaration, reproduced on page 68, called upon member FPAs and governments to try to meet the huge need for information and services, particularly among poor urban communities and those living in remote rural areas. It pledged to intensify its efforts at the international, national and regional levels.

The Journal of Family Welfare thanks the following experts for reviewing articles submitted to it in 1992:

Dr. Kamla Gupta, Department of Migration & Urban Studies, International Institute for Population Sciences, Bombay.

Prof. Tara Kanitkar, Department of Development Studies, International Institute for Population Sciences, Bombay.

Dr. P.S. Nair, Population Research Centre, University of Kerala, Thiruvananthapuram.

Dr. Sulabha Parasuraman, Department of Population Policies & Programmes, International Institute for Population Sciences, Bombay.

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FAMILY PLANNING ASSOCIATION OF INDIA

(Registered Under the Societies' Registration Act, 1860)

AIMS AND OBJECTS

To desseminate knowledge and education about, and to promote the adoption of, the practice of family planning for the advancement of basic human rights, family and community welfare, the achievement of a balance between population, resources and the environment, and the attainment of a higher standard and quality of life.

To assist wherever possible in the national programme of family planning by undertaking to carry out various activities of a complementary, supplementary or innovative nature.

To study and formulate policies and programmes regarding the provision of measures for family planning, population control and allied subjects, and place its considered views and advice before Government and other agencies whenever appropriate.

To undertake or promote studies and activities in regard to services, training, education and research programmes covering the demographic, sociological, economic, medical and other relevant aspects of human fertility and its regulation, including methods of contraception,sterility and sub-fertility, sex and family life education, marriage counselling, population education and human ecology.

To collect information and statistics and to organise conferences, seminars, training courses and other meetings, whether local, national or international, in the furtherance of the Aims and Objects of the Association.

To establish Branches and other units for the promotion of the Aims and Obejcts herein.

To foster and develop contacts with other organisations engaged in similar types of work in India and abroad.

Clauses 8 to 18 deal with administrative and financial subjects.

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